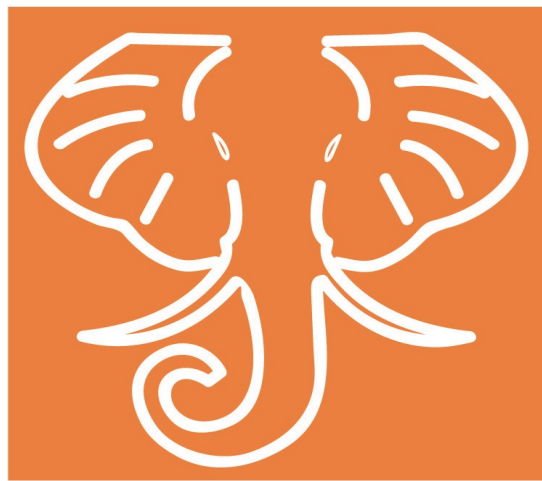


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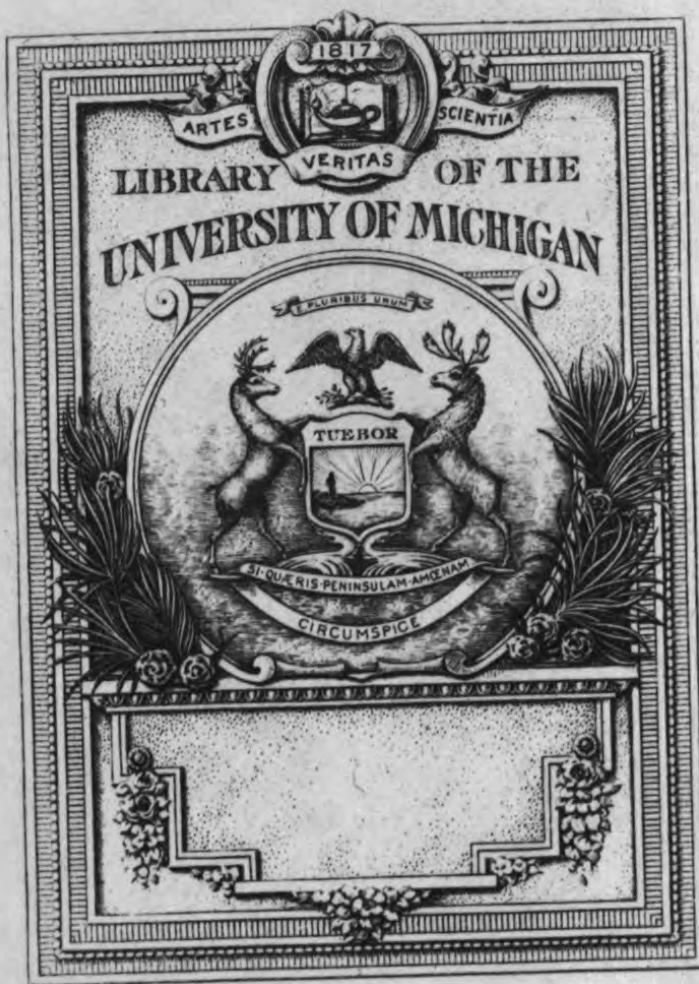
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NUMISMATIC NOTES  
AND MONOGRAPHS

No. 42



TWO HOARDS OF ATTIC  
BRONZE COINS

BY  
ALFRED R. BELLINGER

THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
NEW YORK  
1930

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# NUMISMATIC NOTES AND MONOGRAPHS



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# TWO HOARDS OF ATTIC BRONZE COINS

BY  
ALFRED R. BELLINGER



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BROADWAY AT 156TH STREET  
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## THE CAPARELLI HOARD

By D. H. Cox

### *A Small XIVth Century Hoard from Boeotia*

In the summer of 1927, a hoard of 125 mediaeval coins was found by peasants cultivating a field outside of Caparelli in Boeotia near Thebes. In the hoard there were fifty-three Frankish *tournois*, 1 Sicilian *tari*, and 71 Venetian *soldini*. Judging by the names which appear on both the Frankish and the Venetian pieces, it is probable that the hoard was buried about 1360.

The Frankish coins are all of the well-known type first minted by William Villehardouin, after his visit, in 1249, to Louis IX in Cyprus.<sup>1</sup> They are small billon pieces copied from the French *tournois*, having a cross on the obverse with the name and title of the Prince, and on the reverse a crude representation of a castle and the name of the mint at which the coin was struck (Pl. I, 1). Of the 53 coins here, one was minted at Naupactos by Philip of Tarentum;<sup>2</sup> five are from the mint at Thebes, one was struck by William I,<sup>3</sup> Duke of Athens (1280-1287), and four by Guy II, Duke of Athens (1287-1308)<sup>4</sup> (Pl. I, 2). The remainder are from the mint at Clarenza. At first glance the proportion of Theban coins seems small in a Boeotian hoard, but after the Catalan conquest, about fifty years earlier than the probable burial of this hoard, the Theban mint was little used.<sup>5</sup>



The later Dukes of Athens who were foreign princes, employed Achaian currency minted at Clarenza, introducing as well a certain amount of the coinage of their respective Principalities. Of this, the Sicilian silver *tari*<sup>8</sup> (Pl. II, 12) is an example. It was minted at Messina by Frederick III of Aragon, King of Sicily, and from 1355-1357 Duke of Athens.

The Achaian coins in the hoard are:

2 of Charles II of Anjou, Prince of Achaea. . . . .	1278-1285
1 of Florence of Hainault . . .	1289-1297
1 of Isabella Villehardouin . .	1297-1301
4 of Philip of Savoy. . . . .	1301-1307 (Pl. I, 3)
4 of Philip of Tarentum. . . .	1307-1313
5 of Mahaulte of Hainault . .	1313-1318 (Pl. I, 4)
19 of John of Anjou and Gra- vina. . . . .	1318-1333 (Pl. I, 5)
11 of Robert of Tarentum. . .	1346-1364 (Pl. I, 6)

This sequence is continuous except for a significant break between the reigns of John and Robert. Here we have a period of thirteen years (1333-1346) in which Achaian currency is not represented. The Venetian coins fill this period admirably. There are 71 of these silver *soldini*. Forty-five bear the name of Francesco Dandolo, Doge of Venice from 1329-1339, ten of Bartolomeo Gradenigo (1339-1340), thirteen of Andrea Dandolo (1342-1354), two of Giovanni Dolfin (1356-1361), and one coin is illegible.

# THE CAPARELLI HOARD

3

## FRANCESCO DANDOLO

COINAGE FROM 1332-1339

Number of  
examples

1.	·+·	FRA' DAN DVLO' DVX.		
Rev.	+	S. MARC VS. VE NE TI.	Pl. I, 7, 8	8
2.	·+·	FRA' DAN DVLO' DVX		
Rev.	+	S. MARC VS. VE NE TI.		1
3.	·+·	FRA' DAN DVLO DVX		
Rev.		same as above.	Pl. I, 9	3
4.	?+?	FRA' DAN DVL X.		
Rev.	+S	M/' C VS VE NE TI		1
5.	+·	FRA' DAN DVLO' DVX.		
Rev.	+v	S v MARC VS v VE NE TI.	Pl. I, 10	1
6.	+·	FRA' DAN DVLO' DVX.		
Rev.	+	S. MARC VS. VE NE TI.		3
7.	·+	FRA' DAN DVLO' DVX		
Rev.	+	S. MARC VS. VE NE TI.		6
One of these coins has an erased D on the reverse				
Rev.	+	S. MARC VS. VE NE TI.		1
8.	·+	FRA' DAN DVLO' DVX.		
Rev.	+	S. MARC VS. VE NE TI.		1
9.	·+	FRA' DAN DVLO DVX.		
Rev.	+	S. MARC VS. VE NE TI.		2
10.	·+	FRA DAN DVLO DVX		
Rev.	+	S. MARC VS. VE NE TI.	Pl. I, 11	2
11.	·+	FRA' DAN DVLO' DVX'		
Rev.	:	S: MARC VS. VE NE TI		1
12.	+	FRA. DAN DVLO. DVX.		
Rev.	+	S. MARC VS. VE NE TI.		3
13.	+	FRA' DAN DVLO' DVX:		
Rev.		probably same as above double struck.	Pl. I, 12	1

#### 4 THE CAPARELLI HOARD

14. + FRA DAN DVLO DVX.  
 Rev. +. S. MARC VS = VE NE TI. Pl. II, 1 1

Of these readings No. 1 appears in the Corpus as No. 28, p. 65; No. 4 (?) as No. 26, p. 65: the other readings do not occur, although 10 coins are so worn that they can be attributed to several of the types given here, or can be read as new types but only one can be interpreted as a possible parallel to a third reading in the Corpus.

#### BARTOLOMEO GRADENIGO 1339-1443 10 COINS

Number of  
 examples

15. + BA. GRADO NIC O' DVX.  
 Rev. +. S. MARC VS. VE NE TI.  
 Pl. II, 3 and Pl. II, 4 4

Same as No. 15 p. 68 in Corpus.

16. ? + BA CRADO NIC O' DVX.  
 Rev. +. S. MARC VS. VE NE TI. 1

17. + BA CRADO NIC O DVX  
 Rev. +. S. MARC VS. VE NE TI. Pl. II, 5 1

18. + BA<sup>?</sup> GRADO NIC O DVX.  
 Rev. +. S. MARC VS. VE NE TI. Pl. II, 6 1

These legends are doubtful. Two of these are probably identical with No. 15 and the third may be the same as No. 17 or differ from any quoted here or in the Corpus.

#### ANDOREA DANDOLO 1343-1354 12 COINS

Number of  
 examples

19. + ANDR' DAN DVLO' DVX. ° in field  
 Rev. Pl. II, 7 1

20. + ANDR DAN "DVLO DVX.  
 Rev. +. S = MARC VS = VE NE TI. α in field 1

Same as No. 16, p. 71 of Corpus.

21.    +    ANDR' DAN DVLO DVX.  
Rev.    +.   S. MARC VS. VZ NETI.

There is one coin which may agree with our No. 21, or may agree with No. 52, p. 76.

- |             |   |  |   |
|-------------|---|--|---|
| 22.         | + | ANDR <sup>?</sup> DAN DVLO DVX.        |   |
| <i>Rev.</i> |   | Reverse as above.                      | I |
| 23.         | + | ANDR <sup>?</sup> DAN DVLO DVX.        |   |
| <i>Rev.</i> | + | S. MARC VS. VE NE TI.                  | I |
| 24.         | + | ANDR DAN DVLO DVX                      |   |
| <i>Rev.</i> | + | S. MARC VS. VE NE TI. Pl. II, 8, 9, 10 | 4 |
| 25.         |   | Obverse same as above                  |   |
| <i>Rev.</i> | + | S. MARC VS. VE NE TI. Pl. II, 11       | I |
| 26.         |   | Obverse same as above                  |   |
| <i>Rev.</i> | + | S. MARC VS. VE NE TI.                  | I |

**GIOVANNI DOLFIN 1356-1361**  
**2 COINS**

27. "†. IOHS. DE LP hYNO' DVX in field  
*Rev.* †. S. MARC VS = VE NETI. A
- No. 5, p. 84 Corpus.
28. "†. IOHS. DE LP hYNO. DVX.  
*Rev.* †. S. MARC VS = VE NE TI. A
- No 14, p. 85 Corpus.

Caparelli, where this hoard was found, lies on the road from Chalcis to Livadostro,—that is, on the main thoroughfare between two Venetian trade centers. Euboea was commercially and practically a Venetian stronghold, and Livadostro was the port on the Gulf of Corinth offering the most direct communication between Euboea and the Ionian Islands and Venice. Hence, one would expect to find signs of Venetian trading along this route. In



## 6 THE CAPARELLI HOARD

fact, the appearance of Venetian coins here seems so natural that were it not for a combination of suspicious circumstances, no further comment would be necessary.

Chalcis was a Venetian trade center as early as the first half of the XIII century, and the port of Livadostro<sup>8</sup> was in use from early Frankish times,—i.e., the beginning of the same century. Yet no Venetian coins earlier than those of Francesco Dandolo are found in the hoard, although there are Frankish coins for the previous fifty years. And in spite of the quantity of Venetian money, it is notable that only *soldini* are found. That Achaian coins were in general use by the Venetians in their trade in Greece, may be inferred by the fact that the Venetians, remarking that Achaian currency had depreciated about one-third since the days of Prince William, talked of establishing a mint at Coron or Modon. They never, however, carried out this project in spite of the fact that the character of the coinage was in no wise altered. It is possible but not probable, that as a result of this protest the Principality ceased to concern itself with its own currency and consented to a general use of imported Venetian money to the exclusion of its own.

In 1326, John of Gravina grew tired of his Greek principality and moved to Florence, where he occupied himself with furthering Angevin interests in Italy. Both he and Philip of Tarentum had incurred heavy liabilities to Florentine banking houses, especially to the great banking firm of

Acciajuoli. In 1331, Niccolo Acciajuoli, then a youth of twenty-one, was sent to the court at Naples. His remarkable ability and tact at once secured him the favor of the Angevins. He especially ingratiated himself with Catherine, titular Empress of Constantinople, who confided to him the management of all her affairs and the direction of her children's education, and loaded him with privileges which scandal did not overlook. On the advice of Niccolo, in 1333, the Acciajuoli firm furnished 5,000 ounces of gold (\$75,000) to John of Gravina, in exchange for which he made over all his rights in Achaia to Robert of Tarentum, eldest son of Catherine, receiving in return, Albanian and Epirote territories (Lepanto was excepted) and claims to which Robert or Catherine herself as widow, succeeded. Having successfully negotiated the recovery of Achaia by the house of Tarentum, Niccolo made arrangements with the bank at Florence for the transfer to himself of all fiefs and estates in the Principality which John had pledged, and bought up other mortgages to round out his holdings. He thus became a vassal of the Principality with a distinctly personal interest in its prosperity. At the direction of Niccolo, Catherine sent her financial advisor, Niccolo di Bojano, to make a report on local conditions. This report must certainly have included references to the state of the currency. To Acciajuoli, a banker, a reform in the monetary system must have seemed of primary importance.

The simplest and the usual way to bring back a depreciated coinage is to change the type. This alone would not be enough without the guarantee of reforms in Government. Such reforms would be slow and would demand the continued presence of a responsible person in the Morea. There was no resident prince, for Catherine and Robert remained in Italy until 1338, when they visited Greece accompanied by Niccolo, who, also, was unwilling to live there since his principal interests still lay in Italy. It was desirable to do something which would be more immediately effective than establishing a new type or reinstating the old. What was needed was a ready supply of money of unquestionable purchasing power. To Niccolo, who was unscrupulous as well as clever, it may well have occurred that the most expedient solution of the question was to supply just this. He had the mint at Clarenza to use, and the not too well known Venetian *soldini* (introduced in 1332, only the year before) to serve as models. The satisfaction of coining money in his own name might deter some princes from entertaining such a scheme,—a consideration of no weight here, for Catherine was completely under Niccolo's spell and he was apparently able to convince her that her name on some poor debased coins could add no glory to one who already styled herself Empress. She no doubt, also saw the advantage of immediate returns. At any rate, no coins bearing her name are known. It is most unlikely that the mint at Clarenza con-

tinued to mint the coins of John after the purchase of the Principality in 1333. There are comparatively few coins of Robert known. Certainly not enough to account for an output over a period of thirty-one years, (1333-1364) and a few even for his actual reign of eighteen years. It is also possible that from 1333-1346, the mint was idle. But when we realize that Niccolo, by birth and training a financier, was at that time the most active and able person interested in the affairs of the Morea, this too seems highly improbable.

The alternative is to assume that some other coinage was minted at Clarenza. This may well have been the *soldini* of Venice. That the *soldini* of Francesco Dandolo were freely counterfeited there is no doubt and that these forgeries were cleverly executed is evinced from the fact that none has ever been recognized as such.<sup>1</sup> This is exactly what one might expect if Niccolo Acciajuoli undertook such a scheme. He would do the thing thoroughly. We may suppose that he found capable engravers, probably Italians, and set them to work. He also insisted that a fair percentage of silver be employed. Having embarked on this enterprise, he looked after it himself until the end of his baillie in 1341, and possibly until the death of Catherine in 1346, when his interest would naturally have become less keen and the false coinage would have been well established. Then Robert, weaker and less under the influence of Niccolo, became sole ruler. His vanity demanded coins bearing his own

name and he again minted the old Achaian *tournois*. But the success of the Venetian money was so great that he not only continued the output of *soldini*, but according to Lambros and Schlumberger, added to them the sequins of Andrea. In fact, we may suppose things were going so well that he could not resist putting his own initials on the new coins. With the withdrawal of the active supervision of Niccolo, the Italians, having trained local engravers, would gradually have left, so that only Frankish workmen would have remained at the mint. The engraving rapidly deteriorated until the blatant forgeries of the *soldini* of Laurent Celso were the final result. This seems a fair assumption from historical evidence and is further borne out by the coins themselves.

The *soldini* were first minted by Francesco Dandolo. In 1332 the Senate<sup>12</sup> passed a decree creating two new types of money in the Republic, the *messanino* and the *soldini* with which we are here concerned. This coin, as described in the *Corpus Nummorum Italicorum-Veneto*, Part I, has on the obverse the name and title of the Doge encircling a field in which,

“Doge in cap and cape is kneeling to left holding in both hands the standard with cross, the banner is turned to right and on the banner are 3 dots; no circles.”

*Reverse:* The words “S. Marco Veneti” and in field “lion rampant to left holding in fore-paws standard with banner to right, on banner

three dots; circle separating field and inscription."

All of these Venetian coins are silver, about .67 fine but varying considerably in weight. In workmanship they are incomparably superior to the Frankish *tournois* of John and Robert, with which they are contemporary. On the best of the Venetian pieces, the lettering is executed with great precision; the drawing of the figure of the Doge is good, the detail fine, and the modeling of the head careful, even minute. The lion on the reverse is not quite so successful.

In handling the Venetian coins there is a perceptible difference in texture. They can be divided into two classes,—those that feel "resistant" and those which have a "soapy" feeling. There is also a slight difference in color. On being analysed, the "resistant" coins assayed 69.73% silver, 28.08% copper; the "soapy" and paler, 60.70% silver, 36.77% copper.

Papadopoli gives *Ca.* 67% silver as proper for the *soldini* of Francesco Dandolo, Bartolomeo Gradenigo and Andrea Dandolo.

The coins of Francesco, in this hoard, can be divided into 17 "resistant" and 28 "soapy."

The average weight of the first is 0.92 grammes. This difference in weight can be accounted for in part by wear and cleaning. In cleaning by acid a certain amount of base metal might have been removed, but little if any silver, so that we may assume that when new these coins approximated

Papadopoli's figure both for weight and silver content.

These coins belong to the following categories according to inscription:

No.	<i>Coins</i>
1	5
3	3
4	1
6	1
7	2
9	1
11	1

and 3 unclassified.

In spite of only five of these, those of class no. 1, being represented in the Corpus readings, there is nothing in the character of the coins not represented to make their genuineness questionable.

The coins of Bartolomeo Gradenigo consist of three which are "resistant" and seven "soapy." The first are heavier averaging *Ca.* 0.93 gr. as against 0.91 gr., and all three belong to category No. 15, again the only variety given in the Corpus.

The coins of Andrea Dandolo are more difficult to divide into classes. Nos. 1 and 2 of the category are purer silver and belong to the new type created in 1353, and are certainly genuine. The other ten seem to vary but little in texture. Two of these are badly clipped and weigh only 0.81 gr. and 0.85 gr. The others are distinctly heavier than those of Francesco. The average is 0.95 gr. with two

weighing 1 gr. and 1.025 grs. respectively. The weight of the individual coins is of little significance. The *soldini* cited in the Corpus vary greatly in weight,—for instance, those of Francesco range from 0.77–1.02 gr., and those of Andrea from 0.85–0.95 gr. Both coins of Giovanni Dolfin are of the pure silver type and unquestionably genuine. On the majority of the “soapy” coins of Francesco Dandolo and Bartolomeo Gradenigo, and on most of the coins of Andrea, the lettering is less good than on the coins which we class definitely as “resistant.” The spacing is irregular. The letters themselves are heavier, the broad lines broader, the fine lines not so fine. The small terminating lines of the main strokes are not short, straight and of uniform width, but long, curved and tapering so that in place of the tidy latin M or A we have something of this sort, **M** or **A**. In Ns and Ms the cross bar is horizontal, missing, or sloping up from left to right. Also the little end stroke often does not finish off the other at all, but crosses it casually toward the end, as in **L**. The size of the letters is frequently far from uniform. On coins with such lettering as I have described, the figure of the Doge is also less well done. The collar and ermine border of the cloak are strongly emphasized and the face slighted. The lion too, deteriorates—the line of the tail is frequently broken, as is also the standard. In some cases the free, almost florid character of the letters extends also to the E—compare **G** with **E**. There are other variations such as the use of



)(= instead of the single dot, and a banner with two dots in field, or no field at all.

There seems nothing suspect in the many new combinations of legends. All are possible. There are no errors (the erased D is not an error but a correction), but the generally poor character of the lettering on the coins of low assay does seem to me significant. In this whole series it is, almost without exception, only the S (which is comprehensible), N and M that seem troublesome to the engraver. On the Frankish coins the N was frequently represented by two broad parallel lines. The connecting line, if indicated, was not necessarily horizontal. This was of no particular moment as the two vertical strokes were indication enough of the character of the letter. No confusion was possible. The H was always written **h**, the M as **m**. On the eighteen coins of John of Gravina, only three times does the line slope down clearly from right to left in the N; on the eleven coins of Robert, only twice. The usual form which the N on these coins takes is **Ń**, very much as the N and M both appear in the Venetian and *soldini* in question. The character of certain of the other letters is somewhat florid, and not unlike the Frankish pieces,—notably the **G** mentioned and the **T**.

This can be seen readily by an examination of the coins on Plates I and II. Nos. 3 and 6, Pl. I, illustrate the best of the Frankish coins contemporary with the Venetian in this hoard. Both in quality of workmanship and material, they show a marked

deterioration from the earlier Frankish pieces (Pl. I, Nos. 1, 2, 3) and their inferiority to the Venetian is striking. Pl. I, No. 7, illustrates a soldino of Francesco Dandolo, which is without doubt genuine. Pl. I, Nos. 8-12 inclusive, and Pl. II, Nos. 1 and 2, show others of the same Doge. The character of these is more doubtful. In the same way Pl. II, No. 3 is a probably genuine coin of Bartolomeo Gradenigo, and the three following (Nos. 4, 5 and 6) are less certainly attributable to the mint at Venice. No. 7, Pl. II is one of the new type of Andrea, and of high per cent silver. Nos. 8-11 (Pl. II) are of the old type and not so certainly genuine.

We know that the coins of Francesco Dandolo were freely counterfeited.<sup>16</sup> A decree of the Quarantina, Nov. 17, 1338, prohibited the *soldini* manufactured in great quantity in Slavonia and elsewhere in imitation of the Venetian ones, and ordered the public officials to confiscate and destroy them. Shortly after, on the 18th of January, 1339, this and other penalties of the law were recorded against those who had and held knowingly "moneta de soladini mala et falsa." Finally, in May, 1339, the Senate took up the matter. In the time of Andrea<sup>17</sup> Dandolo, the gold sequins were imitated. Lambros published some which M. Schlumberger agrees should be attributed to Robert of Anjou and the mint at Clarenza. This attribution is strengthened by the find of a gold florin bearing the inscription R.CLAR. The sequins are characterized by the uneven quality of their gold, some having a high

percentage of silver added. There are errors in the legends, and finally the addition of the letters, K, KO or R which are interpreted as the name of Robert. There is also one silver matapan of Andrea with the initial R. and several degenerate *soldini* of Laurent Celso (1361-1365) without the distinguishing initial which these authorities have also attributed to Robert at Clarenza.

Although doubt has been cast on the attribution of the silver matapan to Robert of Clarenza, since it corresponds so perfectly in style to the matapans of Francesco Dandolo, and these so often fail to show an initial F in the abbreviation FRA., and although the advisability of interpreting K.O. as R.O. is questionable, the florin and the *soldini* of Celso are still evidence of the unlawful activities of the mint at Clarenza.

If extended forgeries were being perpetrated during the time of Francesco Dandolo, and again when Andrea Dandolo and Laurent Celso held office, we may reasonably assume that they continued in the four intervening years when Bartolomeo Gradenigo was Doge. This evidence of forgeries, coupled with the doubtful character of the coins in this hoard, and the general state of the Morea at this time, and considering that the activity of the mint at Clarenza is unaccounted for during thirteen years and runs below capacity for another eighteen years, does seem to make fairly clear that here we have the previously unidentified forgeries of Francesco Dandolo, and similar forgeries

of the coins of Andrea Dandolo and Bartolomeo Gradinigo, and that all are from the mint at Clarenza.

<sup>1</sup> Coins had previously been struck before this date at Corinth. This grant, therefore, seems to have been permission to mint coins of the same type as the French and of legal parity with them.

<sup>2</sup> See Schlumberger, *Numismatique de l'Orient Latin*, p. 337.

<sup>3</sup> See Schlumberger, *Numismatique de l'Orient Latin*, p. 338.

<sup>4</sup> See Schlumberger, *Numismatique de l'Orient Latin*, p. 338.

<sup>5</sup> See Numismatic Chronicle 1923, Vol. III, pp. 47H. Here Lord Grantly publishes some Catalan coins which seem to be from the Theban mint. Such coins are very rare.

<sup>6</sup> This coin is similar to one illustrated in Heiss, Pl. 117, No. 1.

<sup>7</sup> See Schlumberger, pp. 315–326

<sup>8</sup> It was from here that Guy I sailed for the court of France in 1259.

<sup>9</sup> Papadopoli, *Le Monete de Venezia*, p. 158.

<sup>10</sup> Papadopoli, *Le Monete de Venezia*, p. 000.

<sup>11</sup> Papadopoli, *Le Monete de Venezia*, p. 161.

<sup>12</sup> Papadopoli, *Corpus*, p. 65H.

<sup>13</sup> Papadopoli, *Corpus*, p. 68H.

<sup>14</sup> Papadopoli, *Corpus*, p. 71H.

<sup>15</sup> Papadopoli, *Corpus*, p. 84H.

<sup>16</sup> Papadopoli, *Corpus*, p. 160.

<sup>17</sup> Schlumberger id. p. 319, 321.











# CAPARELLI HOARD



1



2



3



7



8



9



PLATE I



4



5



6



10



11



12







# CAPARELLI HOARD



1



2



3



7



8



9



12

# PLATE II



4



5



6



9



10



11



12



12



Original from  
UNIVERSITY OF MICHIGAN







# CAPARELLI HOARD



1



2



3



7



8



9



PLATE I



4



5



6



10



11



12



Original from  
UNIVERSITY OF MICHIGAN





# CAPARELLI HOARD



1



2



3



7



8



9



12



13

# PLATE II



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# CAPARELLI HOARD



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# PLATE II



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# NUMISMATIC NOTES AND MONOGRAPHS

No. 44



## ON THE COINS OF NARBONENSIS WITH IBERIAN INSCRIPTIONS

BY  
GEORGE F. HILL

THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
NEW YORK  
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## ON THE COINS OF *NARBONENSIS* WITH IBERIAN INSCRIPTIONS

My excuse for taking up this difficult subject must be that the author of the work on Spanish coins<sup>1</sup> which, we had all hoped, would place before scholars the material for forming their conclusions, has drawn his frontier at the Pyrenees, and ignored the whole of the series in question. The archaeological evidence makes it abundantly clear that the ethnological frontier, at the period with which we are concerned, was north of Narbonne, perhaps even north of Béziers. A recent visit to this region allowed me to examine a certain number of local collections and obtain information which may be of service to students; although I cannot pretend to have completely solved any of the problems, it is at least something to be able to state them more precisely.<sup>2</sup>

<sup>1</sup> A. Vives y Escudero, *La Moneda Hispanica*, Madrid, 1926.

<sup>2</sup> I have pleasure in recording my indebtedness to the archaeologists of the towns that I visited, who gave me access to the various collections. M. Jean Babelon and my other colleagues of the Cabinet des Médailles at Paris have, as usual, been generous in providing casts and answering enquiries. At Nîmes, M. Espérandieu allowed me to study the collection in the Maison Carrée and most kindly introduced me to various other sources of information. M. Félix Mouret showed me the remarkable results of his excavations at Ensérune, and with Dr. Cavalié, M. Cambon and other

## 2 COINS OF NARBONENSIS

We have to deal with three or four series of coins which certainly belong to the district of Narbonensis, since they are always found there, and not to the south of the Pyrenees.

### NERO

The most important and numerous of the series with which we are here concerned can be with certainty attributed to the people who, using the Iberian alphabet, inhabited the site of Montlaurès, a few kilometres to the N.W. of Narbonne; the name of the Roman foundation, *Narbo*, was certainly derived from them.<sup>1</sup> The inscription in Iberian which they bear is to be transcribed *neronc*, *neroncn*, *neroncen* or *neronen*, according to the various ways in which it is written.<sup>2</sup>

members of the Archaeological Society of Béziers enabled me to study the collections in that Society's Museum and in the Museum of the town. Above all, I have to thank Dr. Henri Rouzaud, the distinguished citizen of Narbonne, who during the last quarter of a century has done so much to throw light on the local archaeology and, what is even more important (if only his example were always followed !), to indicate the lines on which scientific exploration should be conducted.

<sup>1</sup> Hübner, *Mon. Lingu. Iber.*, *Nummi* no. 1, gives a nearly complete bibliography of earlier publications, to which however should be added: Muret-Chabouillet, *Catal. des monn. gaul. de la Bibl. Nat.*, nos. 2444-98; Blanchet, *Traité des monn. gaul.*, p. 276.

<sup>2</sup> This is not the place to discuss the value of the various Iberian letters. I adopt the transliteration *o* for the Iberian H, after Gómez-Moreno in *Homenaje a Menéndez Pidal* iii (1925) p. 484. As to the termination *cn* or *cen*, it is a genitive plural: see Schuchardt, *Iberische Deklination*, p. 37.

The name of the place must have been *Nero* (the sound of the *e* may have inclined to *a* before the *r*, hence the Latin form *Narbo* <sup>1</sup>). The attribution of the coins to Narbo is due to Boudard.<sup>2</sup> He transcribed the inscription *Nedhena*, connecting it with *Nado*, as he read the name in Avienus, *Ora marit.* 587. But the text really reads *Naro*, which Hudson corrected to *Narbo*.<sup>3</sup> De Saulcy first read *nerenkn*. Previous writers have usually spoken of the people represented by this inscription as the *Nerenes* or *Nedenes*. In view of what has been said above, it seems convenient to call them *Neronenses*.

The site occupied by the Neronenses was not however that of the Roman Narbo, but a little eminence about four km. N. by W. of Narbonne, which now bears the name of Montlaurès. It is the merit of Dr. Henri Rouzaud that the claim of this site to have preceded Narbo has been definitely established.<sup>4</sup> The statistics which he has been good enough to allow me to compile from the coins, which he and members of his family

<sup>1</sup> Whether the *b* in Narbo points to a peculiar pronunciation of the H, is a question to be left to the philologists.

<sup>2</sup> *Numismatique ibérienne*, pp. 237f.

<sup>3</sup> Muret-Chabouillet have misread Boudard and assume that the MSS have *Nado*. See Schulten, *Fontes Hispaniae Antiquae*, I, pp. 71, 116.

<sup>4</sup> *Comptes Rendus, Acad. des Inscr.*, 1905, pp. 136, 213; 1907, p. 260; 1909, p. 981; 1916, pp. 399, 477, 480; *Bulletin de la Commission Archéol. de Narbonne*, VIII, 1905, pp. 489–521; IX, 1906, pp. 471–481; 1917, pp. 45–49 (*sur les vases d'Arezzo trouvés à Narbonne*).

#### 4 COINS OF NARBONENSIS

have collected on the site during constant visits extending over 25 years, are very significant. The coins of all sorts from the site in his possession now number 423 (reckoning fragments as whole coins). Of these no less than 128 are of the *Neronenses*. They represent all stages of development of this coinage, as we shall describe them later (i.e. the coins of better style, 42; those with the additional inscription *tuiſ* on the obverse, 26; and those, similar to the coins of better style in type, but of degenerate workmanship, 51; and the smaller denomination, with the hippocamp, 9). No other class of coins is represented in anything like the same numbers. Thus of the coins which are attributed below to Brigantio (?), there is only 1; of the Longostaetae, 40; of the coins of Kaiantolos and Bitouios with the lion (perhaps also a flan not struck), 27, and of the quadrans<sup>1</sup> of Kaiantolos with the boar, 3. There are no coins of Betarra (Béziers). Of Massalia there are 31 bronze coins; two silver drachms, and 13 obols ranging from the early period (types of the Trésor d'Auriol) to the third century. To these must be added the obols similar to the ordinary ones with M A between the spokes of a wheel, but having also a stylised bull's head on the reverse (Pl. VI, 1, 2): of this rarity 14 have been

<sup>1</sup> Dr. Rouzaud has a fine specimen of this coin, found at Narbonne, showing the mark of value (three pellets) above the boar (Pl. V, 4).

found at Montlaurès, though 2 are now lost.<sup>1</sup> Imitations of Rhoda and drachms and divisions of the *monnaie à la croix*, in all 99.

Passing over other coins found in small numbers,<sup>2</sup> I note that only one specimen (and that halved) of the very common asses of Augustus and Agrippa struck at Nemausus was found. Of the Roman Republican coins, there are  $7\frac{1}{2}$  asses, 1 semis, 8 smaller divisions;  $15\frac{1}{2}$  denarii and 3 quinarii. Of the Imperial bronze, down to Marcus Aurelius, there are only 4; of the Constantinian period, 6. The Middle Ages and later times are represented by 16 coins and jetons.

In contrast, although he has lived and collected so long at Narbonne, Dr. Rouzaud has only one coin of the Neronenses found *in that town*.

Further proof is not needed that the coins of the Neronenses were struck at Montlaurès. It is also fairly clear that the place was suppressed, doubtless as a part of the general policy of the Romans. The colony of Narbo was founded in 118 B.C.; if Montlaurès was not condemned then, it must have been later, when in 71 B.C., after

<sup>1</sup> There is one in the Bibliothèque Nationale, one at Montpellier (E. Bonnet, *Médailleur de la Société Archéol. de Montpellier*, 1896, no. 69). M. Bonnet suggests that this may be an alliance-coin between Massalia and some other place, and Dr. Rouzaud is inclined to suggest that this place was Narbo, or rather its predecessor at Montlaurès.

<sup>2</sup> Of bronze coins imported from Spain, there are 10 (chiefly asses) of the Indigetae of Emporiae, 1 of Osca, 1 of the Ilrgetes (*Ilrcesen*), 2 of Cese-Tarraco, and 2 uncertain.

the end of the Sertorian War, Pompeius reorganised the affairs of Spain, and set up his trophies on the Pyrenees.<sup>1</sup>

We may then take 71 B.C. as the *terminus ante quem* for the coinage with which we are concerned. When did it begin? The style of the better specimens suggests some time in the first half of the second century B.C. The heaviest recorded specimen (that in the British Museum, here Pl. I, 1) weighs 20.68 grm. Almost all the other known specimens<sup>2</sup> belong to a lighter class, being

<sup>1</sup> The latest pottery which Dr. Rouzaud has found in any quantity at Montlaurès is the so-called black Etrusco-Campanian ware; and the earliest which has been found in any quantity at Narbonne is of the same kind. The maker Rullius is represented at both places, at Montlaurès by the mark reading LVSIMACVS RVLLI (no type), at Narbo by the mark reading LICIN(I)VS RVLLI (type, lyre and club). See Oxé, *Zur älteren Nomenklatur der römischen Sklaven in Rhein. Mus.*, LIX, 1904, p. 128, for the names; *Mémoires de l'Acad. de Nîmes*, 1878 (1879), Pl. 13, 1 and 1a, for the form of the foot of the beakers. The mark of Rullius with the head of Minerva has been found also at Ensérune, but in upper strata which M. Mouret dates to the first cent. B.C. (*Corpus Vasorum*, France, fasc. 6, p. 6, and Pl. 21, nos. 11 and 12). M. Mouret's comparison of the head of Minerva with that on denarii of Servilius Rullius will not bear examination. On the evidence of the forms taken by the nomenclature of the slaves it seems clear that the pottery of Rullius comes down fairly late in the first century B.C. (I have to thank my colleague Mr. F. N. Pryce for information on this point; and I reproduce here in Pl. VI, 9-11, from casts kindly supplied by Dr. Rouzaud, the three stamps of the potter in question.)

<sup>2</sup> A sulphur-cast (of Mionnet's series) in the British Museum represents a coin very similar in style to that just mentioned, and perhaps from the same obverse die; but its weight I do not know, for the original does not seem to be in the Paris cabinet.

what a Roman would call semuncial asses. There is evidence, into which I need not enter here, that the heavier bronze coins of the Indigetae of Emporiae (weighing from 26.70 to 24.12 grm.) were in circulation in the first half of the second century. The heavier Neronensian coins probably represent the same standard in a slightly degraded form. We may therefore regard our coins as having covered a period of about a century, say from 175 to 71 B.C.

Dr. Rouzaud divides his series from Montlaurès into three series:

(1) *Obv.* Veiled female head. In front, Iberian letters *eĭ*<sup>1</sup>.

*Rev.* Bull leaping r.; above, wreath; below, Iberian inscription *neroncn*.

(2) *Obv.* Veiled female head; in front Iberian inscription *tuiš*.

*Rev.* As preceding.

(3) Similar to first group, but of worse style.

Combining the evidence of Dr. Rouzaud's collection with coins seen elsewhere, I would propose the following classification:

1. *Obv.* Veiled female head r.; in front, Iberian letters *eĭ* (or *eva*).

*Rev.* Bull leaping r.; above, wreath; below, Iberian inscription *neroncn*.

Heavy group: recorded weight, 20.68 grm. British Museum. Pl. I, 1.

<sup>1</sup> According to Hubner's transliteration; probably, however, this Iberian I represents the syllable *ba* (as Gómez-Moreno) or *va*.



2. Similar types and inscriptions, but double letter *ce* for *c* occasionally.

Lighter group: weights ranging from 12.92 grm. (Paris 2451) to 6.42 grm. (Paris 2465) or, in imitations such as Paris 2481, as low as 5.05 grm. The style of these steadily degenerates. Varieties are shown in Pl. I, 2–4, from Paris, the Hague, and the British Museum.

3. *Obv.* Same type and letters, but the dress of the bust treated very elaborately.

*Rev.* Bull and wreath as usual, but inscription *neroncen šo*. Weights from 11.74 grm. to 5.92 grm. (B.M.).

The fine specimen from the Hague (Pl. I, 5) shows the peculiar treatment of the bust and dress.<sup>1</sup> The sixth letter of the inscription is sometimes read as an *e* but it is, I think, only the double letter for *ce* badly placed. On the letters *šo* see later, on the coinage of Selo.

4. *Obv.* Similar to group 2.

*Rev.* Bull and wreath as usual, but inscription *neronc*  
*pu . . .*. Berlin, 368, 1877, Pl. I, 6.

This variety is very rare. There are none at Paris nor in Dr. Rouzaud's collection. A coin in the collection of the Société Archéologique of Béziers, which is said to read *pu(r?)pcn* in the exergue, appeared to me, when I saw it, to be

<sup>1</sup> Mr. Robinson compares the uncertain North African coins in Muller, iii, p. 177, where however the engraving is inadequate.

quite illegible. Boudard is responsible for the reading *ptrcn* (he interprets the second letter as *t*), based on three incomplete coins; Zobel, on the few and bad specimens which he examined, noticed a gap between the second and third letters, and suggested *purpcn*. Consequently he associates these coins with those of the Longostaletes which certainly read *purp*. We shall discuss these below.

5. *Obv.* Veiled bust as usual, generally of very careless work; in front, inscription *tuiš*.

*Rev.* Bull and wreath as usual; inscription *neroncen*.

Weights: 12.34 grm. (Stockholm), and 11.75 (Paris 2493) down to 6.60 (London).

The Stockholm example (Pl. II, 1) shows the style well; the British Museum example (Pl. II, 2) shows a peculiar form of the *ce* sign. The reading *neroncencen* on Paris 2496 is a freak. One of Dr. Rouzaud's specimens seems to show the *eš*, (or *eva*) characteristic of the other groups, as well as the *tuiš*, on the obverse.

6. *Obv.* Male head r., wearing an animal's skin (?) head-dress; shoulders draped; in front, Iberian letters *ecc*.

*Rev.* Winged hippocamp r.; below, inscription *neroncen*.

Weights: 7.35 grm. (London) to 4.51 grm. (Paris 2447).

The head is recognized as that of Hercules in

the Paris Catalogue, and a fine specimen in Dr. Rouzaud's collection (obv. on Pl. II, 3) makes it certain that the head-dress is an animal's skin. Yet it is not by any means an ordinary lion-skin that the head wears; the bands that seem to confine it are never found on ordinary heads of Hercules, nor do the lion's forefeet come down to be tied under the chin. The obverse from the British Museum here illustrated (Pl. II, 4) also shows the nostril and eye of the animal, and what appears to be a pointed ear, as of a dog or wolf; a second specimen (Pl. II, 5) shows the Iberian letters on the obverse.

The weight of the coins of this last group shows that they are to be regarded as semisses, if the others are asses.

These are all the coins which can with certainty be attributed to the predecessor of Roman Narbo.

As to the meaning of the types, we have no certainty. The veiled head has been called Diana by Delgado and Heiss; but to say that it is derived from the head of Artemis on the silver coins of Massalia is absurd. At Massalia she is not veiled, and here she has no bow or quiver. There is nothing to be said for Hübner's identification as Minerva, or for Boudard's description of it as a helmeted male head. It is equally unwarrantable to derive the bull from the bronze coins of Massalia; the attitude is quite different, and the fact that a wreath is seen above the bull at

Massalia proves nothing, since that wreath is only one of a number of changing symbols. The bull is doubtless of native Iberian invention. As to the wreath, we see it as a standing accompaniment of the Pegasus on the coins of Emporiae. We do not know what it means there; but the engravers of our coins were doubtless familiar with the coins of Emporiae (a specimen from the Museo Arqueologico in Madrid is shown in Pl. II, 6), which circulated widely in Narbonensis, and may have adopted the symbol as a convenient space-filler. The hippocamp must have been familiar to the fishermen of the coast; the engraver's fancy has supplied it with wings. It is possible that the common type of the quadrantes of other Iberian mints such as Cese-Tarraco, which is generally called a half-Pegasus, may be a half-hippocamp. At Emporiae, on one variety of the Indigetan bronze, the complete hippocamp, wingless, occurs as the reverse type.

Another connexion with Emporiae is to be seen in the letters *eī* or *eva* which appear before the head on the obverse (cf. Pl. II, 6). The same two letters occur in the same position on the bronze asses of the Indigetai; and on one variety, but only one, they are accompanied by what have been taken to be the Roman numerals XV (Delgado, III, Pl. CXXXVI, nos. 206, 207; *Catal. Lorichs*, no. 1267). As a matter of fact the interpretation of the signs as Roman is not certain; the V is smaller

than the X, and is connected by its left limb with the right-hand top arm of the X, so that the whole looks like a monogram of some kind. The Iberian letters *lvs* or *lus* also occur in company with *eī* or *eva* on another coin of the Indigetai, and these too have been taken for numerals. It is obvious that if *eī* is equated, on the strength of the signs XV and of the fact that EI in Greek would have the same significance, with 15, then *lvs* cannot be a numeral, since it also is found accompanying *eī*.

These letters *eī*, apart from the coins of the Indigetai and Neronenses, and certain other small groups of coins of Narbonensis, to be discussed below, are found also on one variety of the as of Saetabi. This can hardly be a case of mere imitation, since Saetabi was so far removed from Emporiae, and the styles of the coins of the two places are not like each other.<sup>1</sup> Further, just as on the Neronension coins we find *eī* on the as, and *ecc* on the semis, so too at Saetabi we find *eī* on one variety of the as, and *cc* (if the signs are rightly interpreted) on a semis. But, if *cc* is the mark of denomination of the semis, how is it that at Emporiae it does not occur? There, on one series, we find *eī* on the as, *e* on the semis, *e*

<sup>1</sup> It is this which rules out the suggestion, which had occurred to me, that *eī* (the latter sign frequently carries with it the vowel *a*, so that we might read *eia*) is an abbreviation in Iberian letters of the Latin name *E(mpor)ia*; cp. *ho n* as an abbreviation of *ho(lsca)n* on coins of Osca.

followed by a horizontal dash on the quadrans, and ŷ on the sextans.

Until further information is available, it is clear that we must leave this problem undecided.

### SELO

The existence of a place of this name is attested by certain coins corresponding to the asses of the Neronenses. Their style is distinctive, so that there can be no question of their being blundered Neronensian coins; but they bear the same type of the veiled female head, accompanied by the same mark *eī*; on the reverse is the charging bull accompanied by a wreath. But the inscription is clearly *Šeloncen*. In collections and catalogues they are usually found lurking among coins of the Neronensians.<sup>1</sup> The specimen from the Vidal Quadras y Ramon collection is illustrated in Pl. III, 1; the reverse of the Paris specimen in Pl. III, 2.

On the analogy of *Neroncen-Nero* we may assume *Šeloncen-Selo*. But no such name has come down in literary records.

The types show that there was a close connexion between the two places. Therefore it is

<sup>1</sup> Hübner no. 12; Heiss, Pl. LXV, 4; Delgado, Pl. CXCIV, 4; Muret-Chabouillet nos. 2468-9; Catal. Vidal Quadras y Ramon no. 498. (I owe a cast of this to M. Bourgey.) M. Mouret has a good specimen found at Enaérune; there is another in the collection of the Société Archéologique de Béziers.

not unreasonable to suggest that the letters  $\xi o$  which occur in the exergue of a certain group of coins of the Neronensians are an abbreviation of  $\xi(el)o$ . Such a method of abbreviation is easily paralleled in Greek inscriptions, e.g. **MM** for  $\mu(\nu\eta)\mu(\eta s)$ , *I.G.*, XIV, 1829; **ΘΚΧ** for  $\theta(\epsilon o\iota s)$   $\kappa(a\tau a)\chi(\theta o\nu\iota o\iota s)$ , *ibid.*, 1359; **MNΓ** for  $\mu(\eta)\nu(as)\gamma'$ , *ibid.*, 1715.<sup>1</sup>

### OTHER ISSUES

In connexion with the coins of Nero and Selo, we have to deal with certain issues which must have been produced in the same district, but for which no satisfactory attribution is forthcoming. Under Narbo one finds described the following coin:

*Obv.* Beardless head r., with short curly hair, between two dolphins; dotted border.

*Rev.* Bull running r.; above, wreath; below, broken down inscription **ΛΘΙΙΙ** on exergual line; plain border.  $\text{\AA}$  25 mm. 7.98 gm. Paris 2481, Heiss, Pl. LXV, 9. Delgado, Pl. CXCV, 9. Cp. Hübner, *M. L. I.*, no. 15*b*. Here Pl. III, 3. Another (from the same dies?) is in the Ashmolean Museum, from the Marqués de Molins Collection, presented by Mr. W. H. Buckler.

Pujol (*epigr.* n. 193*b*) publishes another similar piece, in which the last three strokes of the

<sup>1</sup> From a number of similar instances which I owe to Mr. M. N. Tod.

inscription are wanting. The first sign is the same in both, although Hübner reproduces it on the Paris coin as a plain I (which he transliterates *ī*). I have very little doubt that we may regard the whole inscription as a barbarous attempt at *neron*. It occurs in almost exactly the same form on other coins at Paris (Nos. 2477, 2481), which have the usual obverse of the Neronenses. There is no need therefore, with Hübner and others, to put these coins in a special category. The obverse is evidently inspired by the Iberian head accompanied by dolphins which must have been familiar in the district from coins imported from the other side of the Pyrenees.

Closely allied to the last-mentioned group is another (Pl. III, 4, 5) which shows a semi-barbarous imitation of the Iberian horseman carrying a palm-branch on the reverse, in combination with the same two obverses, i.e. the veiled female head with the usual mark *eī*, and the male head between the dolphins.<sup>1</sup> The dolphins, it is true, have almost entirely disappeared, but there are slight traces of them on at least one specimen. These coins are represented in the collections at Paris, Nîmes and Béziers, and are never, so far as we know, found in Spain, but only in the Narbonnaise. The best specimens of each type known

<sup>1</sup> Boudard, *Num. ibér.*, Pl. XXIX, 11, 13, 14; Heiss, Pl. LXVI, 2. Paris Catal. 2701-6. Hübner no. 10. Zobel in *Mem. Num. Esp.*, v, pp. 219, nos. 23-25. Pujol, *epigr.* no. 196.



to me are in the Maison Carrée at Nîmes, and I illustrate these from casts which I owe to the kindness of M. Espérandieu. The inscription below the *jinete* was read NMY by Boudard (who attributed the coins to Nemausus), Λ·M·V by the Paris cataloguers (who point out the baselessness of Boudard's attribution), and Λ·MY by Zobel and Hübner. Hübner, in accordance with his practice of transliterating everything, however barbarous, as if it were good Iberian, gives the equivalent of these signs as *l.šū*. A close examination of all the available specimens (casts of two from Nîmes and six from Paris lie before me as I write) shows that the reading is Λ·ΛY with possibly a faint stroke joining the second dot to the top of the next stroke. It seems clear that, according to our present lights, there is nothing to be made of the broken-down inscription; I can make no suggestion as to what Iberian inscription lies at the back of it.

### BRIGANTIO

Another group closely allied to the *asses* of the Neronenses comprises coins with the usual types of veiled female head (and letters *eī*) on the obverse, and bull accompanied by wreath on the reverse, which however bears the inscription *pricatio* or *pricantio*. There is, I think, no doubt about the reading; on the British Museum speci-

men illustrated in Pl. III, 6, all the letters are clear except the *ti*, and that is certain from other specimens.<sup>1</sup> We may dismiss the readings which see an *o* in the second letter. The first may represent either *p* or *b*; there was, as is well known, no special sign for *b* in Iberian. Similarly the sign used for *ca* may also represent *ga*. The sign following has almost universally been read as *i*. A close examination of all the specimens available to me shows that there is hardly the slightest foundation for reading it as anything but *n*.<sup>2</sup> It is of course only a question of a single small stroke, which turns an *n* into an *i*. The sixth letter is *ti* (on Gómez-Moreno system; *t* according to Hübner and others). The final letter appears to me to be *o*, but others read it as *n*. Both *-atin* and *-ntin* are possible Iberian terminations. We thus have the possibility of *Brigatio* or *Brigantio*. That is a Celtic name; but at the time when these coins were struck (2d–1st cent. B.C.), Iberians may well have been in occupation of a site which formerly belonged to the Celts.

<sup>1</sup> See Boudard, Pl. XXIX, nos. 3, 5, 9; Heiss, p. 437, Pl. LXVI, 1; Delgado, iii, p. 468, Pl. CXCV; Robert, *Numismatique de Languedoc*, p. 516, Pl. IV, 21–23; Zobel in *Mem. Num. Esp.*, V, p. 26, nos. 39–41; Pujol, *épigr.* nos. 191a–b; *Paris Catal.* nos. 2499–2506; E. Bonnet, *Médailleur de la Soc. Arch. de Montpellier*, 1896, p. 16, no. 184; Hübner, no. 11. One (reading *pricalio*) is in the collection of Dr. Rouzaud at Narbonne, found at Montlaurès; another in the collection of the *Soc. archéologique de Béziers*.

<sup>2</sup> Of the Montpellier specimen, which I have not been able to see, M. Bonnet writes that, although the fifth letter appears to be *i*, he cannot affirm that it is not an *n*.

Of the other interpretations we may mention Hübner's *p(u)ricaitn*; which is rightly rejected by Schuchardt. The coins are said to be frequent in the neighbourhood of Béziers, which has suggested, through the reading *bricitze* (Heiss), a very hazardous equation with some ancient form of the name of that place (which appears as *Βήταρρα*, *Baeterrae*, *Besara*, etc.; see Ihm in Pauly-Wissowa, I, 2762f.).

The two forms, with and without *n*, are an illustration of *anousvara*. If the reading *i* is insisted on, we may assume alternative forms as in *Brigetio-Βριγαίτιον* (Ptol.) and *Bregentio-Brigantio* on the Danube.

If we look for a place of this name in the region with which we are concerned, we must rule out the two places called Brigantium in Galicia (*Betanzos*) and in the Cottian Alps (*Briançon*);<sup>1</sup> they are too far away. I mention, however, as interesting in this connexion, the name of the vicus *Brugetia*, which was somewhere in the territory of Nemausus.<sup>2</sup> The comparatively good style of our coins, however, suggests an origin even nearer to Narbo than we can suppose Brugetia to have been. It is worthy of mention merely as showing that a name of this kind was possible in the district.

<sup>1</sup> See Schuchardt, *Iber. Dekl.*, p. 41.

<sup>2</sup> *C. I. L.*, XII, 3362 and p. 346; now in the Musée Lapidaire at Nîmes (Espérandieu, *Le Musée Lapidaire de Nîmes, Guide Sommaire*, 1924, p. 19).

## LONGOSTALETAE

This tribe is not mentioned by any literary authority, and is known only from its coins, which are inscribed ΛΟΓΓΟΣΤΑΛΗΤΩΝ or ΛΟΓΓΟΣΤΑΛΗΤΩΝ.<sup>1</sup> Both provenance and style indicate that the coins were struck somewhere in the neighbourhood of Narbonne and Béziers. Dr. Rouzaud possesses no less than 40 specimens (including fragments) found at Montlaurès. The chief varieties are:

1. *Obv.* Head of Hermes r., with formal curls, wearing winged diadem or hat, and sometimes torque with animal ornament; behind, caduceus.

*Rev.* Tripod-lebes; on r. and l., variously arranged, ΛΟΓΓΟΣΤΑΛΗΤΩΝ(ΩΝ) or ΛΟΓΓΟΣΤΑΛΗΤΩΝ. Æ Weights from 17.37 to 7.18 gm. Pl. IV, 1-4.

2. *Obv.* Similar, but in front of head, ΒΩΚΙΟC or ΛΟΥΚΟΡΙΚΝΟC or ΛΟΥΚΟΤΙΚΝΟC.

*Rev.* Similar; inscription always ΛΟΓΓΟΣΤΑΛΗΤΩΝ, and between the first part of the inscription and the tripod, four Iberian letters *p u r p*. Æ Weights 13.20 to 3.86 gm. Pl. IV, 5-7.

The earlier form of sigma (with splayed arms) is found on only a few specimens of the former

<sup>1</sup> Hübner no. 2b and 2c (for 2a see above, p. 7 ff.). To his bibliography add Muret-Chabouillet nos. 2350-99; H. de la Tour, *Atlas*, Pl. VI; G. Amardel in *Bull. de la Comm. Arch. de Narbonne*, 1893, pp. 328-54; 1894, pp. 13-36; 1895, pp. 549-64; Blanchet, *Traité*, pp. 272-8.

variety.<sup>1</sup> The great majority of the specimens show the lunate sigma (*e.g.* Paris 2357, here Pl. IV, 4).

As to the interpretation of the inscriptions, there has been some dispute. Most of the views will be found set out by Muret-Chabouillet and Hübner. That which depends on dividing the legend into two parts, *Longos* and *Taleton*, the first being the name Longus, the second the genitive plural of the name of a tribe, may be dismissed without further consideration. There is now general agreement that the name represents a tribe of *Λογγοσταλήται* or *Λογγοσταλήτες*. The names *Bokios* and *Loukoriknos* or *Loukotiknos* have a Celtic rather than an Iberian air. But the short Iberian inscription *purp* shows that these kings, if such they were, ruled in a place where Iberian was spoken. It is to be noted that on one small group of coins of the Neronenses we have the first two letters *pu*<sup>2</sup> associated with the main

<sup>1</sup> The four-line sigma is very rare on these coins. Paris no. 2350, described as bearing it, is so much worn that it is impossible to detect the form (Pl. IV, 2). 2355 (3355 in the Atlas) appears to have the early form with splayed arms (Pl. IV, 1). Both these appear to have Ω. A British Museum specimen has Σ with parallel arms, and, apparently, W (Pl. IV, 3).

<sup>2</sup> Boudard, p. 246, Pl. XXVIII, 9, 10, published the coins which seem to indicate a longer inscription *purcn*. Heiss, p. 436 (after Saulcy and Boudard) completes it as *parp(e)(oe)n*. Zobel (*Mem. Num. Esp.*, V, p. 30) here reads *purcn* and says that on the few examples, all badly preserved, that he has seen, there is a small gap between the second and third letter, so that the reading may perhaps be completed as *pu(r)pcn*. I have not been able to see any

legend, in just the same way as the *ſo* (which may as we have seen stand for Selo), and as the *purp* on the present coins are associated with their main legends. Whether this association means alliance or subordination it is not possible to decide.

The interpretation of *purp* (this transliteration may be regarded as correct, and all attempts to read it otherwise, as *plr**p* or *btr**p*—in connexion with Beterra—may be ignored) is quite uncertain. Of course the *p* may have been a *b*. Any connexion with Perpignan (Saulcy, Lenormant, Zobel, Heiss) is ruled out by the fact that Perpignan did not exist in antiquity.<sup>1</sup> It has also been suggested that there may be a connexion with Pyrene. This is not the place to enquire into the question of the situation of that city, which was in *Sordiceni caespitis confinio*,<sup>2</sup> i.e. between the Sordi and the Ceretes. It was, as Schulten says, the first port of Spain approached by the Massaliotes before they founded Rhoda and

specimen showing more than the first two letters or any trace of there having been a longer legend.

<sup>1</sup> Philippon (*Les Ibères*, p. 184) with his usual inaccuracy accuses Hübner of translating *Purpcn* by *Perpinianum* "sans même se demander si Perpignan existait à l'époque où les Longostalètes battaient monnaie." Hübner merely quotes the opinion of Saulcy and Zobel. He himself says cautiously "nomen fortasse origine cohaeret cum urbis vetustae Pyrene ab Avieno dictae or. marit. v. 558 ss. et cum montibus Pyrenaeis."

<sup>2</sup> Avienus, *Ora maritima* (ed. Schulten, *Fontes Hisp. Ant.*, I, 1922), v. 568 and p. 115.

Emporiae. He thinks it is to be sought among the promontories of the Pyrenees at *Cadaques*, where there is not only a safe port but a way into the interior, which is lacking to the other ports on this coast. It is clear enough from Avienus that Pyrene was south of the Pyrenees. Therefore any attempt to identify it with Ensérune, the site near Béziers from the cemetery of which M. Mouret has excavated so remarkable a collection of antiquities, including imported Greek pottery from the sixth century downwards, will not bear examination.<sup>1</sup> If then there be a connexion between the *names* Pyrene and *Purp*—which seems not very likely, since the second *p* would remain unexplained—there is still no probability that the *place*, if it is a place, represented by *purp* is identical with the city of Pyrene.

We do not, of course, know whether *purp* represents a place or something else. But if the reading *pu(r)pcn* or *purcn* recorded from certain coins of the Neronenses in private collections<sup>2</sup> is correct, that must be a genitive plural of an ethnic, of the familiar form. Another argument in favour of its being a place-name would be forthcoming if we could be certain of the soundness of the suggestion, made above, that the letters *šo*

<sup>1</sup> See F. Mouret, *Des influences helléniques et tartessiennes sur le Languedoc Méditerranéen et le Roussillon aux temps préhistoriques*. *Bull. Soc. Archéol. de Béziers*, 1929), pp. 21f.

<sup>2</sup> See above, pp. 3–4.

on other coins of the Neronenses represent a place *Selo*.

What is the period of this coinage of the Longostaletes? Here we have to take into consideration the definite datum, provided by M. Félix Mouret,<sup>1</sup> that the two coins of the Longostaletes obtained by him in the necropolis of Ensérune were found in two vases, figured one of them on Pl. 18, no. 2, the other on Pl. 19, no. 5, of his publication.<sup>2</sup> Now of these vases that on Pl. 18, no. 2 (described as of the Attico-Italiot style), may belong to the third century; but that on Pl. 19, no. 5, of Campanian style, is earlier, and certainly as early as the fourth century.<sup>3</sup>

Unless we are to suppose that the craftsmanship of these obscure peoples of Narbonensis was much in advance of that of the Greeks from whom they borrowed their ideas of coinage, it is impossible to date any of the coins of the Longostaletes before the third century B.C. It is not reasonable to date them earlier than, for instance, the third century coins of Rhegium with the tripod reverse,

<sup>1</sup> In a letter to me dated 5 Dec. 1929.

<sup>2</sup> *Corpus Vasorum Antiquorum*, France, fasc. 6, Collection Mouret (Fouilles d'Ensérune), Paris, no date (!).

<sup>3</sup> Prof. J. D. Beazley writes: "the calyx-krater CV. Mouret, pl. 19, 5, belongs to the second half of the fourth century. It is Attic, as I pointed out in *J. H. S.*, 1928, p. 127 . . . : it can therefore be correlated with Attic r.f. calyx-kraters for shape: the r.f. calyx-kraters of this shape-stage are in the full Kerch style: the full Kerch style can be dated by the dated Panathenaic amphorae. Pl. 18, 2, I should call very late fourth or early third, but am not sure how late it might be in the third."



which their own reverse recalls. The bronze coins of Massalia, with the tripod on the reverse, from which some have thought the tripod of the Longostaletes was derived, cannot reasonably be dated before 250. The coins of the Celtic rulers Rigantikos, Bitoukos, Kaiantolos seem to be more or less contemporary with or even earlier than those which we are considering; and a coin of Agathocles, of his last period (304–289 B.C.), was actually used as the blank for a coin of Kaiantolos.<sup>1</sup> I do not press the argument that the title βασιλεύς, which these rulers use, was not employed by the successors of Alexander before 306 B.C., because we know that barbarians were independent of Greek usage in this respect, as the coins, for instance, of Geta, King of the Edonians, suffice to prove.

The form of the letter *sigma* in the inscription is unfortunately not of much service in dating the coins.<sup>2</sup> The *sigma* with splayed arms is found down to the first century B.C. The form Σ, with parallel arms, occurs as early as the fourth century, if certain coins of Sicyon are correctly dated, which is doubtful;<sup>3</sup> at any rate it is common from the third century onwards. The lunate *sigma* occurs on a coin of Cos which is thought to be earlier than 300 B.C.; on a coin of

<sup>1</sup> Muret-Chabouillet, no. 2424.

<sup>2</sup> Hill, *Handbook*, p. 213.

<sup>3</sup> B.M.C. *Peloponnesus*, Pl. 8, 21.

the Illyrian king Monunios, who is supposed to have reigned about 300 or 280 B.C.; at Tarentum in Evans's Eighth Period (272–235 B.C.) on four out of the forty varieties of coins belonging to that period; in the next period (235–228) on five out of the ten varieties;<sup>1</sup> on a coin of Seleucus II of Syria (246–226 B.C.) and in many other places before the end of the third century. Since the coins of Sicily are most likely, after those of Massalia (the dating of which is very uncertain), to furnish evidence bearing on our special point, we may note<sup>2</sup> that it occurs first at Agrigentum ca. 241–210 B.C.; at Agyrium after 241 B.C.; at Syracuse after 212 B.C. It is difficult to admit that it could have found its way to Narbonensis before the last quarter of the third century.

As to the form of the *omega*, the form  $\omega$ , which is usual on these coins, is late; its occurrence on a coin of Antiochus II (261–241 B.C.) is exceptionally early.<sup>3</sup> It is not found in Sicily before the period of Roman dominion (Entella, Solus).

M. Blanchet, the writer who has most recently considered the date of the coins in question, has gone very thoroughly into the whole matter. He holds, like most of those who have preceded him, that the date of the coins of the Longostaletes

<sup>1</sup> Evans, *Horsemen of Tarentum*, p. 184 note.

<sup>2</sup> On the basis of Grose's *Catalogue of the McClean Greek Coins*, Vol. I.

<sup>3</sup> Hill, *Handbook*, p. 214.

is bound up with that of the coins bearing the names of the kings Bitovios (Bitoukos) (Pl. V, 5, 6), Amytos (Pl. V, 3), Kaiantolos (Pl. V, 1, 2, 4) and Rigantikos (Pl. V, 7). F. de Saulcy, Ch. Robert, and Amardel have all attributed these regal coins to Narbo. The types are similar to those of the coins bearing the name of Béziers (BHTAPPATIC), although the latter show a hand in front of the bust on the obverse, and are of a very degenerate style (Pl. IV, 8; in the British Museum, presented by Dr. Rouzaud); and the coins themselves are common in the collections of Narbonne and Béziers. M. Blanchet proceeds to the dating of these various groups of coins as follows:

He starts with the admission of Robert's suggestion that the quadrantes of Kaiantolos, with a boar on the reverse (Pl. V, 4), are copied from a coin of Phintias of Agrigentum (287-279). This seems to me unnecessary. Is it necessary, for instance, to explain the boar on the coins of Avenio by reference to Phintias? A great deal too much has been made of the filiation of quite ordinary types, such as bulls and boars, which could hardly be represented otherwise than they are. If the representations coincide exactly, we are told that one is copied from another. If, as in the case of the bull with a wreath above it at Massalia and on the coins of the Neronenses, the attitudes differ altogether, we are told that it

does not matter.<sup>1</sup> Gibbon's remark, that "much learned trifling might be spared, if our antiquarians would condescend to reflect that similar manners will naturally be produced by similar situations," may with profit be applied to archaeology in general. However, we may admit without further question that the coins of Kaiantolos (Pl. V, 1, 2, 4) are later than those of Phintias. They have the four-legged sigma, like the earliest coins of the Longostaletes. The lion of all the coins of the kings concerned, and of Beterra, may, M. Blanchet says, well be imitated from coins of Syracuse attributed to Agathocles (317-289). The type of the tripod of the Longostaletes may come from bronzes of Agrigentum or of Massalia; but he finds that the style of the bronzes of Massalia with the tripod is inferior to that of the earliest bronzes of the Longostaletes. We must go to Sicily, he thinks, for the origin of this, as of the butting bull, which he holds was borrowed by Massalia from Sicily about the middle of the third century. Thus it follows that the types of the Longostaletes and of the Gaulish kings Kaiantolos, etc., must have been adopted successively in the course of the third century.

<sup>1</sup> Blanchet, p. 276, note 7. I may note that if an origin is wanted for the Neronensian type it should be sought in the Iberian series, at Emporiae, where the bull and wreath occur as regular types of certain semisses, and where the wreath is the constant accompaniment of the Pegasus of the asses, not, as at Massalia, merely one of a number of changing symbols (Pl. II, 6).

Of all the coins of the region, those of the Neronenses are the most numerous, and show the longest development (or degeneration).<sup>1</sup> The coins of the Longostaletes with the names Bokios and Loukotiknos and the Iberian inscription *Purp* are, he thinks, contemporary with the earliest of the Neronensian. The coins of the Longostaletes without the personal names in Greek, and also without the Iberian inscriptions, are earlier than the others. They show the four-legged sigma,<sup>2</sup> like the coins of Kaiantolos; whereas the other coins of the Longostaletes, and those of the other kings, have the lunate sigma. The kings he ranges in the following order by style and legend: Kaiantolos, Amytos, Bitoukos, Bitovios, Rigantikos; they will be found in that order on our Plate V.

I gather, then, that M. Blanchet's view of the relative chronology of these coins may be expressed more or less by the following diagram, in which the coinages mentioned in the first row may be placed roughly about the middle of the third century.

<sup>1</sup> He says (p. 277) that since they are the commonest, and also those of which the issue lasted longest, for we find numerous stages of deformation, we may conclude from this remark that they are the most recent. This seems to me to be logically elliptical; I take it that it means that since we find a number of stages of deformation, the issue must have lasted long, and the deformed types are the most recent.

<sup>2</sup> This is not rigidly true; in the British Museum is one with the lunate sigma.

	Longostaletes without personal names	Kaiantolos
Neronenses	{ Longostaletes (Bokios and Loukotiknos)	{ Amytos Bitoukos Bitovios Rigantikos

The coins of Beterra, which are often very degenerate, might be added at the bottom of the third column.

If we accept the date of ca. 70 B.C. for the suppression of the *oppidum* of the Neronenses at Montlaurès, we may take it that their coinage stopped then, while the other coinages with which we are concerned had already come to an end some time before.

Considered by itself, this complex of coinages might well seem to be dated between about 250 and 70 B.C. But it cannot be considered apart from the Iberian coinage with which it is manifestly connected. One has only to compare the male head on the obverse of the coins of Kaiantolos with that on Iberian coins such as those struck at Cese-Tarraco (Pl. IV, 9) to see that one is a copy of the other; nor can there be much doubt which is the original and which the copy. The Iberian type of curly-haired head is so characteristic that we cannot suppose it to have been independently invented in Gaul; the Gibbonian

maxim quoted above does not apply here. Nor can it ever be admitted that the type which spread homogeneously over a vast area in Spain was copied from coins of a small issue made by obscure *reguli* in Narbonese Gaul. Therefore the coins of Kaiantolos are not earlier than the earliest Iberian coins with the familiar type of the curly-haired male head and the horseman reverse. There is a general agreement that these date at the earliest from about 218 B.C. We are therefore forced to bring the origin of the coinage of Narbonensis down by at least fifty years.

I confess that, as far as style is concerned, this later date is quite agreeable. It was generally to the "second-first century" that, on beginning the study of these coinages, I was inclined to date them, on grounds of style, and on the assumption that they followed instead of led the development in matters of coinage, when compared with their nearest neighbours among the Greeks. That was before I looked for any points that might be fixed by external evidence. Dr. Rouzaud's work at Montlaurès has furnished a *terminus ante quem* for one series, at any rate, which gives us no difficulty. M. Mouret's *datum*, on the other hand, is by no means so easy to digest. How long was the cemetery at Ensérune in use? Is it likely that many fine vases would have been preserved for more than a century before they were used for burial? Considering

how commonly fragile porcelain is treasured by us for a longer period than that, we can surely admit that the inhabitants of Ensérune kept their fine Greek vases, of solid construction, for one or even two hundred years, and did not use them as ossuaries as soon as they were imported. Until M. Mouret's excavation-notes are properly published—for the fascicule of the *Corpus Vasorum* is quite inadequate as an account of the groups in which pottery and other objects were found—we shall not be able to estimate the value of his discoveries as evidence for the dating of the coins. The assumption that the coins belong to the date of the origin (or even of the importation) of the vases in which they were stated to have been found leads us into difficulties so grave from a numismatic point of view that we are bound to reject it.

Coins of Sicily and Southern Italy found their way in quantities into Spain and Southern Gaul. It has been thought that the Iberian bronze coinage with the curly-haired head and the *jinete* was suggested by the spearman coins of Hiero II; and we have already mentioned various theories as to the prototypes of the coinages of Southern Gaul. This constant search for prototypes, which allows nothing to the originality of Spaniard or Gaul, has, as we have hinted, been much overdone. Still the general effect of the influx of quantities of foreign coins may be admitted. It might at



least suggest the idea of a coinage of their own to the inhabitants. Imitative coinages in barbarous or semi-barbarous countries do not as a rule begin until the supply of imported coins begins to fail. At least we must allow the imported coins a long circulation before the necessity of supplementing them by a native coinage begins to be felt. Therefore, whether we admit that the peoples of Narbonensis actually copied foreign coins, or got from them merely the idea of a coinage of their own, whose types occasionally reflected foreign models, we may reasonably say that the native coinage was two or three generations behind that which inspired it. And thus the end of the third century or beginning of the second seems the most suitable date for the beginning of the bronze coinage in Narbonensis.

Where were the coins of the Celtic rulers without tribal or place-name, and the coins of the Longostaletes, struck? Amardel has collected statistics of the local frequency of these coins. They lead him to the conclusion that Narbo was the place where all the coins, those of the Longostaletes, those of the Celtic chiefs of the Volcae, and those with purely Iberian inscriptions (i.e. the Neronensian), were struck. Narbo, he thinks, may, like Emporiae, have comprised two cities, that of the Longostaletes, which was the older and has disappeared, and that of the Volcae, which was superseded by the Roman colony.

The coinage of the Longostaletes perhaps began before that of the chiefs of the Volcae, and lasted to the beginning of the Roman domination. The purely Iberian coins succeeded those of the Volcae. "The language of the Iberians had superseded Greek in all the country. The appearance of an Iberian legend on the coins of the Longostaletes, which before then had been purely Greek in spite of the origin of that people, proves this. The foreign elements had been absorbed everywhere, the ancient nationality reappeared, the Iberian race remained predominant. The barbarous style of the last coins of the Gaulish chiefs, of the last coins of Riganticos, bears witness to the decline of the Hellenic civilisation and the decadence of the Volcae. The Iberians had regained their predominance."<sup>1</sup>

The passage just quoted expresses admirably what seems to have been the course of events, but it is hardly possible to accept the attribution of all three series of coins to one and the same mint. The discoveries of Dr. Rouzaud leave no doubt as to the locality of the mint of the Neronenses. The filiation of the types of Beterra with those of the Gaulish chiefs affords a presumption that Beterra was the mint of the latter. Amardel finds that his statistics\* are against such an attribution. Let us see what they come to:

<sup>1</sup> *Bull. Comm. Arch. de Narbonne*, 1895, pp. 563-4.

\* *Bull. dela Comm. arch. de Narbonne* 1892-3 pp. 344 ff.

# 34 COINS OF NARBONENSIS

	Coll. Jallabert (formerly Narbonne)	Musée de Narbonne anc. fonds	Musée de Narbonne Legs Bonnet	Coll. Don- nadieu Béziers	Col. L Bonnet Béziers	Soc. arch. Béziers
Longostaletes . . . . .	7	5	10	21	3	—
Gaulish Chiefs . . . . .	5	3	3	21	8	3
Nero . . . . .	18	14	14	56	34	12
Beterra . . . . .	—	—	—	10	6	1

Compressing the six columns into two we have

	Narbonne Collections	Béziers Collections
Longostaletes . . . . .	22	24
Gaulish Chiefs . . . . .	11	32
Neronenses . . . . .	46	102
Beterra . . . . .	0	17

These details would require some modification now; in fact I found 4 coins of Beterra in the collection of the Société archéol. de Béziers. The 12 coins of the Neronenses in the same collection included one of Selo. There is also one of Brigantio.

The preponderance of the coins of the Neronenses is more marked at Béziers than at Narbonne; yet, in view of the facts revealed by Montlaurès, we should not be justified in attributing them to Béziers. The statistics seem to me to show no case for Narbo as against Beterra as the mint of the coins of the Longostaletes and the

Gaulish chiefs.<sup>1</sup> The fact is, the statistics collected by Amardel are on too small a scale to be of service; they are not comparable with the observations of Rouzaud. One thing is clear, and that is that the coins of the Neronenses are generally distributed, and must have circulated widely, at Béziers as well as at Montlaurès. But they were produced at the latter place. If we went merely by Amardel's figures, we should assume that not only they, but also the coins of the two other groups, were produced at Béziers. Now add Dr. Rouzaud's figures to those of the Narbonne collections:

	Narbonne Collections and Montlaurès	Béziers Collections
Longostaletes . . . . .	62	24
Gaulish Chiefs . . . . .	41	32
Neronenses . . . . .	174	102
Beterra . . . . .	—	17

I.e., in the Narbonne and Montlaurès collections together, 59.2 of the coins are of the Longostaletes as compared with 100 of those of the Neronenses; at Béziers the proportion is 53.9 to 100. And that after 25 years of intensive collecting at Montlaurès, where the provenance of every coin

<sup>1</sup> Some strange things may be done with statistics. Amardel says that from the richness of private collections at Béziers we must not conclude that all these coins are commoner there than at Narbonne; this richness merely proves the indefatigable zeal of the collectors. And so on.

is certain, whereas the indefatigable collectors of Béziers doubtless accumulated coins not found in their own parish.

The mint of the Longostaletes and of the Gaulish chiefs must therefore for the present remain uncertain. Excavation may at any time reveal it. As to the dates of the coins, we may accept M. Blanchet's arrangement of the groups relatively to each other, placing the beginning of the coinage of the Longostaletes and of Kaiantolos at the very end of the third century, and bringing the latest coins of the Neronenses (to which we may add those of Selo and Brigantio as well as Beterra) down to about 70 B.C.

Whether Nero had a coinage earlier than that represented by the bronze coins with its name is a question that has to be considered in the light of Dr. Rouzaud's suggestion about the silver obols of Massaliote types. It is certainly remarkable that of these extremely rare coins, of which only 16 are known, 14 were found at Montlaurès. One of the latter is illustrated in Pl. VI, 2; the specimen in the Bibliothèque Nationale in Pl. VI, 1. I should regard them not as alliance coins with Massalia—alliances of this sort were probably much less common than it has been the fashion to suppose—but as mere imitations. The stylised bull's head which distinguishes these coins represents the animal whose complete figure appears on the later bronze. These obols

correspond, in their way, to the imitations of Massaliote obols issued at Ilerda.<sup>1</sup>

## SILVER COINS

It remains to mention a few silver coins, which were certainly struck in Gaul, but bear Iberian inscriptions.

1. The small silver coins with the head of a nymph on the obverse, *rev.* wheel or cross (derived from Rhoda). The inscription on the reverse appears to be **Δ<ΟΥ<ΑΥΥ** *acoequntin*,<sup>2</sup> Pl. VI, 3. There can be no doubt of the Iberian character of the inscription. Doubtless the unblundered examples were struck much nearer the Spanish border than any of the places of provenance mentioned. The weight of the specimen from Saint-Etienne des Landes is given by Luneau as 3.60 grm.; that in the Paris cabinet is 3.45 grm. The two blundered specimens from Blaye (Pl. VI, 5, 6; Paris 3548-9) are on the other hand lighter (2.65 and 2.61 gm.). The weight of the heavier specimens agrees with that

<sup>1</sup> Paris 539 = Heiss, Pl. IX, 2; Vidal Quadras y Ramon no. 323 = Heiss, Pl. IX, 3. Vives (I, pp. 14-16) is unduly sceptical about these coins of Ilerda.

<sup>2</sup> Ch. Robert, *Numismatique de la province de Languedoc*, p. 488, Pl. III, 19. Zobel, *Mem. Num. Esp.*, V, p. 221. Pujol, *Epigr.* no. 190. Hübner no. 15a. *Rev. Num.*, 1901, p. 311, Pl. VIII, 134 (from Saint-Etienne des Landes, Dordogne). Blanchet, *Traité*, I, p. 284, fig. 148. Cp. also Muret-Chabouillet, nos. 3548-9. The more or less blundered specimens were found at Blaye (Gironde), Limogne (Aveyron).

of the common *monnaies à la croix*, generally attributed to the Volcae Tectosages.

2. Another silver coin also derived from the Rhoda types is in the Paris Cabinet (Pl. VI, 4). It has the head of the nymph to r., on the *rev.* a cross cantonned with globules and letters which have been read **DTMYS**.<sup>1</sup> The connexion with the coins just described is obvious. Its provenance is not known. Hübner, reading *untga*, compares the beginning of the Iberian form of the name of the Indigetai. Heiss's guess at Agde and other suggestions recorded in Muret-Chabouillet have no plausibility.

3. The unique silver coin in the British Museum (Pl. VI, 7). *Obv.* Head of Roma r. in winged helmet; behind, X. *Rev.* Dioscuri riding r.; below, Iberian inscr. *iece*. 2.62 grm.<sup>2</sup>

The inscription *iece* has been connected by Zobel with the Iacetani; but Iaca is well represented by a quite different class of pure Iberian coins, and style and weight point to some place north of the Pyrenees. Nor does there seem to be any reason for connecting it, as Pujol does, with the purely Iberian coins reading *iešo*. Vives describes it as a Gaulish imitation in which are mingled Roman and Spanish elements. The

<sup>1</sup> Hübner no. 15g, with bibliography, to which add Muret-Chabouillet 3558; Atlas, Pl. X; Blanchet, *Traité*, p. 283.

<sup>2</sup> From Dr. Nott's Sale, 1842. Zobel (*Mem. Num. Esp.*, V), p. 20, no. 3, and p. 221. Pujol, *epigr.* no. 112 and p. 343. Hübner no. 15c. Vives, *Proh.*, p. xlix.

lettering is perfectly good, and was done by someone who understood Iberian, not by a mere Gaulish imitator. The types are imitated from a Roman denarius of the second century B.C. The weight however is that of the Massalian victoriatus of the same period.

The reading of the inscription on an imitation of a Massalian coin, as *gīrekī* (Hübner 15e), *libeci* (Sausseye, p. 92), etc., etc., is quite uncertain, especially in view of the fact that we cannot be sure that the inscription is Iberian at all.<sup>1</sup> A specimen from the Bööcke collection (Pl. VI, 8) has long lain (and will for the present continue to lie) among the imitations of Massalia in the British Museum; on it **VIDKOKA** is to be read.

<sup>1</sup> There are three similar drachms in the Newell Collection with the inscription clearly reading **OKADIA** (cuts below). Two of these coins are said to have come from a large hoard of cognate pieces unearthed "somewhere in the Po Valley", and the third was purchased from a dealer in Germany. It seems almost certain that they can have nothing to do with southwestern France. R. Forrer, *Keltische Numismatik der Rhein- und Donaulande*, pp. 85-89, assigns them together with similar pieces, to the Maritime Alps.

EDITOR.







# NARBONENSES

# PLATE I



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# NARBONENSES

## PLATE II



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# NARBONENSES

## PLATE III



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# NARBONENSES

## PLATE IV



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# NARBONENSES

# PLATE I



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# NARBONENSES

# PLATE II



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# NARBONENSES

## PLATE I



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NARBONENSES

PLATE II



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# NARBONENSES

## PLATE III



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NARBONENSES

PLATE II



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# NARBONENSES

## PLATE III



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# NARBONENSES

# PLATE IV



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# NARBONENSES

## PLATE III



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# NARBONENSES

## PLATE IV



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NARBONENSES

PLATE III



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NARBONENSES

PLATE IV



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# NARBONENSES

## PLATE V



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# NARBONENSES

## PLATE V



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# NARBONENSES

## PLATE VI



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35  
.N9

# NUMISMATIC NOTES AND MONOGRAPHS

No. 45



## A MINT IN NEW YORK

BY  
BAUMAN L. BELDEN

THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
NEW YORK  
1930



## PUBLICATIONS

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The American Numismatic Society. Catalogue of the International Exhibition of Contemporary Medals. March, 1910. New and revised edition. New York, 1911. xxxvi, 412 pages, 512 illustrations. \$10.00.

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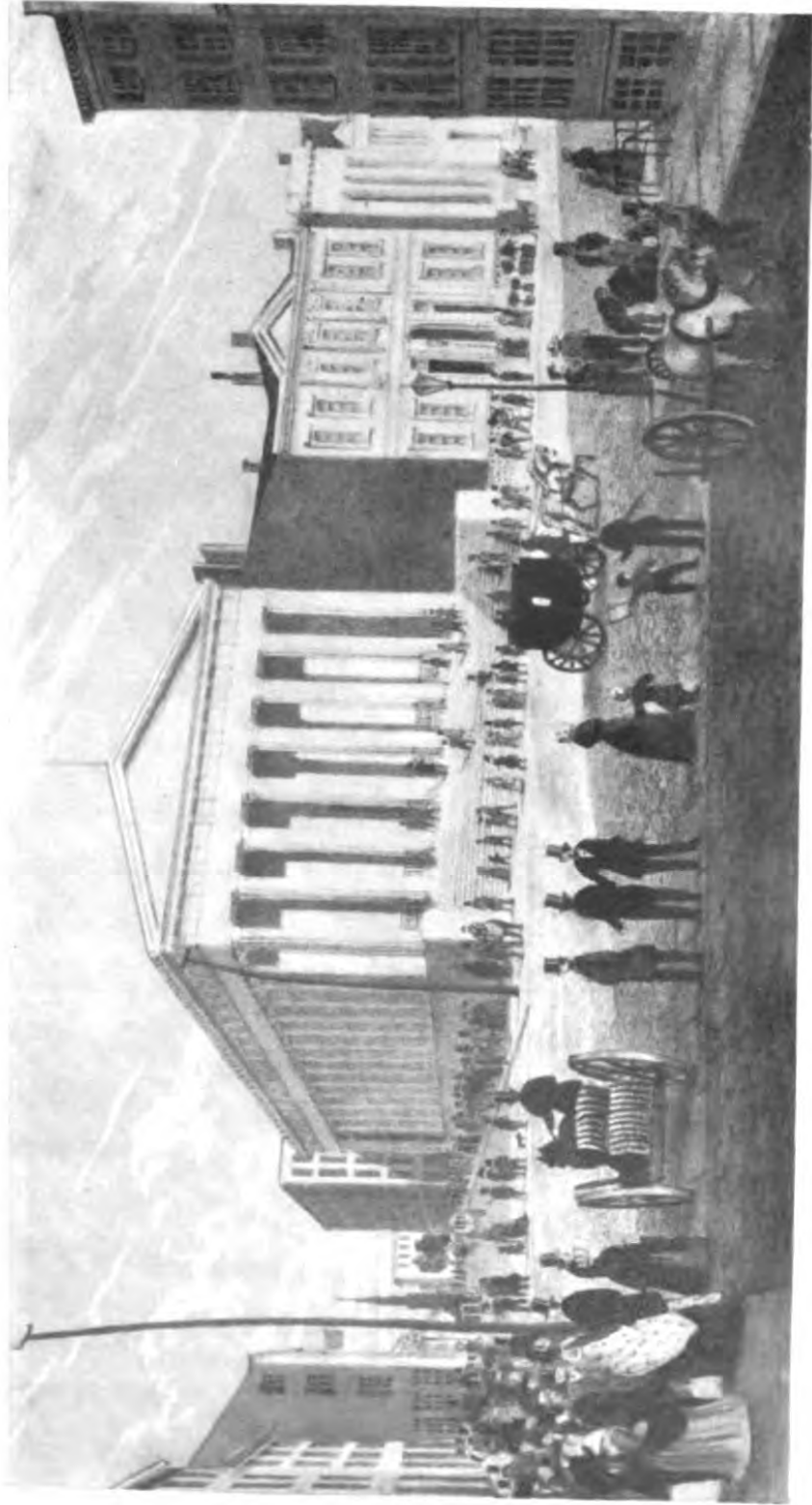
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1930



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## A MINT IN NEW YORK

BY BAUMAN L. BELDEN

In looking over a lot of old correspondence at the United States Mint in Philadelphia, while hunting up information on another subject, I found some papers relating to the views held at the Mint regarding the agitation in Congress looking towards the establishment of a Mint in New York, and believing that this is a subject that has pretty well passed out of memory by this time, and that the Philadelphia documents have not seen the light for seventy years or more, I have copied the most important of them and submit them to the members of this Society.

Under date of December 10, 1845, the Hon. Joseph R. Ingersoll, a member of Congress from Pennsylvania, wrote to the Director of the Mint, Dr. Robert M. Patterson, the following letter:

“A project is on foot for establishing a branch mint at New York. It will probably be strongly urged by the gentlemen from that state, and from what I heard today I presume at an early day. As I am uninformed of the merits of the contemplated arrangement and do not at all know whether local interest or the public good and general advantage are in view, I must refer myself to you. In the introduction of a sub treasury system a mint at New York would be

## 2 A MINT IN NEW YORK

both an argument and a convenience; and as the 'Independent Treasury' is seemingly resolved on, the other would be likely to be made an incident. If you have any wishes or views it will give me pleasure to hear from you."

The information asked for was as follows:

1. Cost of erecting the Mint at New Orleans and supplying it with machinery.
2. Whole cost of that Mint to the government, to the present time.
3. Estimated cost of a Mint at New York, including the lot, and the machinery.
4. Estimated annual expense when in operation.
5. Cost of transporting silver and gold bullion from New York to the Philadelphia Mint for coinage.
6. Course generally taken for the transportation of bullion and coins, particularly dollars, from Spanish America to the middle and northern states.
7. Whether there is reason to believe that there is retained in the New York and Boston banks, an amount of foreign coins greater than is required for supplying the balances of exchange with Europe. Also what would be the effect, in the shipment of the precious metals out of the country, of the conversion of foreign into American coins.

8. What would be the probable effect, on the operations of the Philadelphia Mint, of the establishment of a Mint at New York.

On December 20 Dr. Patterson sent the following reply:

"After a delay which I regret, but could not avoid, I now proceed to answer the inquiries made in your letter of the 10 inst., regarding the projected Branch Mint at New York.

"It seems as if the first question to be answered should bear upon the necessity of such an establishment.

"I would answer it by stating the fact that the coinage of the four existing Mints have never reached the amount which could be executed in this Mint alone, and which may be fairly estimated at twelve millions.

"The second question should have regard to the cost. This I can answer but very imperfectly. The Mint at New Orleans cost, before it went into operation, more than \$300,000; and the building is of brick, and of no great pretension. A most important item of cost, moreover, was saved, by the lot on which the building was made having been presented for the purpose, by the city. I am confident that New York would not be satisfied with a Mint costing less than half a million. The annual expense thereafter may be estimated at \$50,000.

#### 4 A MINT IN NEW YORK

"Is a Mint at New York required by the expense to the depositors, in that city, of having their coinage done in Philadelphia?

"A simple statement will answer this question. The cost of transporting silver from one of these cities to the other, is one dollar for \$1000 worth; and the cost of transporting a thousand dollars worth of gold varies from 25 to 38 cents. It would therefore be much more economical for the government to pay this charge, than to establish and maintain a new Mint.

"Another important question, in its bearing upon this subject, regards the places from which the deposits received at Philadelphia for coinage come.

"To answer this I have caused a most laborious examination of our books to be made, and the result is that, from the 1st of January 1839 to the 31st of December, 1844 inclusive, the deposits were as follows:

<i>From New York and places north of it.</i>		<i>From Philadelphia and places south of it.</i>	
No.	Value	No.	Value
Silver . . . 386	\$1,136,226.	2,365	\$7,251,566.
Gold . . . . 722	2,625,653.	2,815	7,152,575.
<hr/>		<hr/>	
Both . . 1,108	3,761,879.	5,180	14,404,141.

"In presenting this statement, I have to mention that we have no means of tracing the sources of the deposits beyond the banks or houses from which they are sent to the Mint, and in whose names they are made.

"Is any large amount of bullion (including in this term foreign coins), kept back by the bank in New York and north of it, which would be received were there a Mint in that city?

"I cannot, of course, give you any specific answer to this question; but a probable inference may be drawn from the following statement.

"During the last summer, the Treasurer of the United States issued transfer drafts, in favour of the Mint, upon banks in New York and Boston, to the amount of \$228,000, payable in foreign silver coins or bullion. Only one of the banks, as I have reason to believe, was able to furnish its contingent, of \$10,000, from its own vaults. The rest were obliged to resort to the houses of Beebee and Parshall, bullion brokers, for the silver required of them. Mr. Beebee of the Philadelphia house, informs me that the silver, which was almost exclusively of Mexican dollars, was received from the west at Philadelphia.

"It seems to me inconsistent with an economical administration of the government that there should be a Mint both at Philadelphia and New York,—cities but five or six hours distant from each other. You know that this measure was formerly recommended by Mr. Woodbury, and strongly urged by the authorities of New York; but it did not then command the support of Congress, and I presume that it will hardly so do now."

A little over a month later an inquiry of the same character came from the Senate:

6 A MINT IN NEW YORK

Washington City,  
Jan. 21, 1846.

*Sir:*

The Committees on Finance of the Senate have before them several memorials etc. on the subject of the establishment of Branch Mints at New York and Charleston, So. Carolina. This morning I was instructed to request you to furnish us with your views upon the expediency of proving such additional Branches, to be accompanied with an estimate of the expense. Will you be good enough to inform us what amount of foreign gold and silver is sent from N. York to Phila. to be coined, and what is the cost of coinage to the owners, including transportation interest etc.

Any general remark of a practical character which you may be disposed to submit in reference to new Branches of the Mint will be thankfully received.

Very Respectfully

Yr. obt. servt.

[Signed] DIXON H. LAVIS (of Albany)

*Chairman of Committee.*

To R. M. Patterson, Esqr.

Mint of the United States  
Philadelphia, Jan. 23rd, 1846.

*Sir:*

I have the honor to acknowledge the receipt of your letter of the 21st inst., asking, on the part of the Committee on Finance, for my views with regard to the proposed establishment of Branch Mints at New York and Charleston.

As to the Branch at New York, I received from the Chairman of the Committee of Ways and Means of the House of Representatives, a series of inquiries, which, I believe, call for all the information which it is in my power to give, to enable those with whom the question rests, to form a judgment as to the expediency of establishing a Mint at that place. I take the liberty, therefore, of sending a copy of my reply to these inquiries, as I do not know how I could better convey to you the information which you require as to this Branch.

The question of a Mint at Charleston was brought before Congress at its last session, and under more favorable circumstances than now exist; for it was proposed as a substitute for the Branch at Charlotte, of which the building and machinery had been destroyed by fire.

My opinion was then asked by the Chairman of the Committee on Finance, of the Senate, and I send you a copy of my reply. My views are not changed. I think a third Mint for the gold region of the Southern States unnecessary. Those already established are abundantly competent to all the coinage that can be required for that region.

Very respectfully

Your faithful servant

[Signed] R. M. PATTERSON

*Director of the Mint.*

To Hon. Dixon H. Lavis

Chairman of the Committee on Finance,  
U. S. Senate.



## 8 A MINT IN NEW YORK

From *The Evening Post*, New York, Friday evening, March 19, 1847. A correspondent says:

“The mercantile community of your port are impatient for the establishment of a Mint, in which foreign gold and silver may be deposited as soon as it is landed. There is no need of a Mint or a Branch Mint for this purpose. Only appoint an assayer, an officer empowered to receive in behalf of the government, bullion and foreign coins, ascertain their value, give certificates for them and see to their custody, and its return to the depositor in American coinage.’ ”

“The New York community, we can assure our correspondent, will be well satisfied with anything short of the establishment of a mint, which will give them all the accommodations of one without making any essential addition to the public expenses. If we can obtain mint certificates for deposits to be returned here, we care not where the metal is coined. The branch mints in Georgia and South Carolina cost the government seven thousand dollars each in salaries alone, to say nothing of their other expenses. Meantime the whole coinage of gold and silver from mines in the United States does not amount to a million of dollars. This we suppose might be more cheaply coined if we had no mints at Dahlonega and Charlotte, we want to see no unnecessary additions to the list of public offices.”

The following bill was presented in the Senate, in 1850, to become effective when the New York Legis-

lature shall have passed a law declaring all Mint property exempt from taxation. .

*"A bill to establish a branch of the Mint of the United States in the city of New York.*

*"Sec. 1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That a branch of the Mint of the United States shall be established in the city of New York for the coinage of gold and silver and copper. And for the purpose of purchasing a site, erecting a suitable building, and completing the necessary combinations of machinery for the said branch, the sum of two hundred and twenty-five thousand dollars is hereby appropriated, to be paid out of any money in the Treasury not otherwise appropriated.*

*"Sec. 2. And be it further enacted, That so soon as the necessary building shall be erected for the purpose of well conducting the business of the said branch, the following officers shall be appointed, upon the nomination of the President, and with the advice and consent of the Senate, viz: One superintendent, one treasurer, one assayer, one melter and refiner, and one coiner. And the said superintendent shall engage and employ as many clerks and as many subordinate workmen and servants as shall be provided for by law; and the salaries of said officers and clerks shall be as follows:*

*"To the superintendent the sum of two thousand five hundred dollars; to the treasurer the sum of two*

thousand five hundred dollars; to the assayer two thousand dollars; to the melter and refiner two thousand dollars; to the coiner two thousand five hundred dollars; to two clerks the sum of twelve hundred dollars each; to the subordinate workmen and servants, not exceeding twenty in number, such wages and allowances as are customary and reasonable, according to their respective stations and occupation.

“Sec. 3. *And be it further enacted*, That the officers and clerks to be appointed under this act, before entering upon the duties thereof, shall take an oath or affirmation before some judge of the United States, faithfully and diligently to perform the duties thereof; and shall each become bound to the United States of America, with one or more sureties, to the satisfaction of the Directors of the Mint and the Secretary of the Treasury, with condition for the faithful and diligent performance of their offices.

“Sec. 4. *And be it further enacted*, That the general direction of the business of said branch of the Mint of the United States shall be under the control and regulation of the Director of the Mint at Philadelphia, subject to the approbation of the Secretary of the Treasury; and, for that purpose, it shall be the duty of the said director to prescribe such regulations and require such returns, periodically and occasionally, as shall appear to him to be necessary for the purpose of carrying into effect the intention of this act in establishing the said branch; also for the purpose of

discriminating the coin which shall be stamped at said branch and at the mint itself; and also for the purpose of preserving uniformity of weight, form, and fineness in the coins stamped at said branch; and, for that purpose, to require the transmission and delivery to him at the Mint, from time to time, of such parcels of the coinage of said branch as he shall think proper, to be subjected to such assays and tests as he shall direct.

“Sec. 5. *And be it further enacted*, That all the laws and parts of laws made for the regulation of the Mint of the United States, and for the government of the officers and persons employed therein, and for the punishment of all offences connected with the mint or coinage of the United States, shall be, and the same are hereby declared to be in full force in relation to the branch of the mint by this act established, so far as the same shall be applicable thereto.

“Sec. 6. *And be it further enacted*, That whenever the treasurer named in the second section of this act shall be appointed, all monies, books and papers, in the hands of the assistant treasurer in the city of New York, shall be transferred to the treasurer of the branch mint established by this act; and said branch mint shall thereafter be the place of deposit for the public monies, instead of the rooms now used in the custom house. And the treasurer of the said branch mint shall be subject to all the provisions contained in the act entitled, “An act to provide for the better organization of the Treasury, and for the

## 12 A MINT IN NEW YORK

collection, safe-keeping, transfer and disbursement of the public revenue," approved August sixth, eighteen hundred and forty-six, which relate to the treasurer of the branch mint at New Orleans."

Amendments, providing for a Branch Mint in San Francisco, by Hon. Thomas H. Benton, of Missouri.

"Sec. 7. *And be it further enacted*, That a branch of the Mint of the United States be established in San Francisco, California, for the coinage of gold and silver. And for the purpose of purchasing a site, erecting a suitable building, and completing the necessary combinations of machinery for the said branch, the sum of three hundred thousand dollars is hereby appropriated to be paid out of any money in the Treasury not otherwise appropriated.

"Sec. 8. *And be it further enacted*, That temporary buildings shall be procured or erected immediately for carrying on the business of said branch mint, and the following officers shall be appointed upon the nomination of the President, and with the advice and consent of the Senate, to wit: one Superintendent, one Treasurer, one assayer, one melter and refiner, and one coiner. And the said superintendent shall engage and employ as many clerks, and as many subordinate workmen and servants, as shall be provided for by law; and the salaries of said officers and clerks shall be as follows: To the superintendent, and

to the treasurer, the sum of five thousand dollars each; to the assayer, to the melter and refiner, and to the coiner, the sum of four thousand dollars each; to the clerks the sum of three thousand dollars each; to the subordinate workmen, not exceeding twenty, such wages and allowances as are customary and reasonable according to their respective stations and occupations.

“Sec. 9. *And be it further enacted*, That the third, fourth, and fifth sections of this act shall be held and taken to be applicable to the said branch mint at San Francisco, in the same manner as if specially named therein; and the said branch mint shall be the place of deposit for public moneys collected in the Custom House at San Francisco, and for such other public moneys as the Secretary of the Treasury may direct; and the treasurer of said branch mint shall have the custody of the same, and shall perform the duties of an assistant treasurer, and for that shall be subject to all the provisions contained in an act entitled, ‘An act to provide for the better organization of the Treasury, and for the collection, safe keeping, transfer and disbursement of the public revenue,’ approved August the sixth, one thousand eight hundred and forty-six, which relates to the treasurer of the branch mint at New Orleans.

“Sec. 10. *And be it further enacted*. That the officers authorized to be appointed by the eighth section of this act, shall be appointed immediately, and shall perform such duties in assaying and fixing the value of gold in grains or lumps, and in forming the same

into bars, as shall be prescribed by the Secretary of the Treasury, either for individuals, companies, or the government; and the sum of fifty thousand dollars, out of any money in the Treasury not otherwise appropriated, be and the same hereby is appropriated for defraying the expense of the said gold assay, for the fiscal year ending the 30th of June, 1851."

Senate Chamber

Washington, Jany 30th 1850.

ROBERT M. PATTERSON, Esqr.

*Sir:*

You are aware that a number of memorials have been presented to Congress at its present session, praying for the establishment of a Branch Mint in the City of New York. In order to act understandingly on this subject it is necessary to be informed of the capacity of the U. States Mint At Philadelphia to do the business of the country. If it be of capacity to coin all the gold and silver that find their way to this country, it would be a useless expenditure of money to establish a Branch Mint at New York. Will you be good enough to inform whether it be so or not?

Very respectfully

Your obt. svt.

[Signed] JAMES COOPER.

The Director of the Mint replied to the above as follows:

Mint of the United States  
Philadelphia, Feb. 8, 1850

*Sir:*

In reply to your letter of the 30th ult., in which you call my attention to the subject of the proposed Branch Mint, at New York, and the memorials relating thereto, I beg leave to present the following considerations.

First. As to the capacity of the Mint at Philadelphia.

The coinage at this Mint, in 1847, was \$14,348,366. This was by far the greatest amount ever executed by us in any one year, and yet it did not reach the capacity of the Mint for coinage. The coinage required in the following year, 1848, was but \$3,265,138.

In the year 1849, which has just expired, the gold from California, was brought to the Mint in large quantity, and it was found to contain combined with it so much silver as to require the separation of the two metals. For this operation, upon so large a scale as was necessary, the refinery at the Mint was not prepared, and the process of parting could not keep pace with the deposits. It was necessary, therefore, that the refinery should be enlarged, and until this was done, the Mint, in one of its departments was insufficient for the work. The difficulty, however, has at last been removed. It is estimated that two millions worth of gold can be parted in a month; from which it is evident that we are prepared



## 16 A MINT IN NEW YORK

for coining all the bullion that is likely to be brought to the Mint.

Secondly. As to the expense of a Branch Mint at New York.

If a Mint is to be established at New York, it should be at least upon as large a scale as that at New Orleans, and the appropriations made for the buildings, machinery, and fixtures of that Mint, prior to its commencing operations, amounted to \$312,000. The building is of brick, without architectural pretension, and the lot on which it is erected was presented for the purpose by the city. The average of the annual appropriations for that Mint, for ten years, was \$55,305. With a lot to pay for, and with much greater coinage to execute, a Mint at New York would no doubt require more than that at New Orleans, both for its first cost, and its subsequent expenses. I am, indeed, convinced that the annual charge of such a Mint would be quite equal to that of the Mint here, which costs from seventy to eighty thousand dollars a year.

Thirdly. As to the necessity for the proposed Mint.

It being evident from the foregoing statements that the proposed Mint is not required from any want of capacity in the existing Mint, and that its establishment would prove a heavy charge to the government, I shall now consider what are the countervailing arguments on which the advocates of the project rest for its support. The Memorial of the New York

Chamber of Commerce presents certain statistics, showing that in the year 1847, twenty-one millions out of the twenty-four millions of specie imported into the United States was received into the ports of Boston and New York, the greater portion at the former city principally, but it is stated for the account of the latter. Estimates are also given of the amount of bullion received from emigrants and from California tending to prove that the Government should coin the specie where it is received, and that it is unjust to subject its owners in that city to the "risk, expense and delay" of remitting it to a Mint "nearly 100 miles off."

Upon this argument I would remark that the year 1847 which has been referred to, was one in which the influx of bullion to this country was extraordinary, and from the experience of which no safe inference could be drawn. In the fiscal year ending June 30th 1848, the specie import was but \$7,360,284, while the exports were \$15,841,616, including \$2,700,412 in our own coin. It is quite improperly assumed, too, that the facility of a Mint would secure the coinage of all, or even of a very large portion of such bullion. The specie which fluctuates between different countries, especially between Great Britain and the U. S. is mostly set apart for the settlement of that portion of the commercial debts of each, which, from temporary circumstances cannot be paid by the transfer of merchandise. It serves this purpose perfectly so long as it is in coin of a well ascertained value no

matter what country. It is not likely, therefore, that a bank or a merchant would be at the pains to have such coins very extensively converted in our own, when in a few days or weeks it may be needed for export to the very country from which it was received.

So far as it relates to the large excess of California gold received at New York, it should be born in mind that, if the intended Mint in that region be established, it is not improbable that a large portion of the imports of specie from that source will be in our own coin, fitted to pass at once into circulation.

It is quite evident, however, that New York receives at present a far greater amount of bullion than Philadelphia. But the argument that infers from this fact alone, the necessity of a Mint there, overlooked one essential point for consideration, and that is, at what points would the specie, if recoinced, be distributed? The national Mint coins money without charge, not that it may benefit private merchants or importers here and there, but because a national coinage is a common benefit for the people at large. The inquiry then follows, where does the coin when it is made belong? Where does it settle? Where is the central location? If this inquiry be overlooked, there may be established a Mint at New York, and yet the people at large, the owners of the Mint issues, be as far off from their money as they are now. Some clue to this inquiry may be found in the report of the Sec. of the Treasury on the condition of the banks, presented to Congress in August 1848. From that

report it appears that about the beginning of the above year the states were intimately connected with New York,—namely, Maine, New Hampshire, Vermont, Mass., Rhode Island, Conn. and New York had \$12,884,063 of specie in bank vaults; while those more likely to depend upon a Mint in Philadelphia, say N. J., Penn., Del., Mo., Va., Ohio, Indiana and Kentucky, had \$19,465,867. So that custom house tables of specie importation do not show the essential distribution of that specie.

I shall now examine what is the real amount of “expense, risk and delay” to which New York is subjected from the necessity of transporting bullion to Philadelphia for coinage, and from which the memorial referred to argues the necessity of the proposed Branch Mint.

The expense of transporting between the cities is, for gold, 37½ cents per thousand dollars worth, for silver \$1.; if we suppose the amount sent to us, on private account might reach \$6,000,000 in gold and \$1,500,000 in silver (quite an extravagant estimate) we shall find the entire cost complained of to be but \$6,250, and this would be somewhat reduced by the gain on the re-coinage of foreign coin over its market value.

The *risk* of transport is shown by experience, to be quite inappreciable. Of the amount coined in 1847, there was sent to the Mint on Government account, under the act of Feb. 9, 1793, \$7,597,806 from New York, and \$1,551,033 from Boston. These sums were

carried by Adams & Co.'s express. The expense of transportation hither was paid on \$8,615,993, and also on \$4,485,812 of that money which was returned. The whole amount transported therefore, was \$13,101,805, and the total cost was \$5,474. The sums brought to the Mint from Boston, New York and Baltimore, and returned, have for many years been almost exclusively entrusted to the express lines, and not a single instance of loss has occurred to my knowledge.

The *delay* in making returns to depositors at the Mint is at present quite considerable, but the reasons for this it has been already explained, are of only a temporary operation. We confidently expect to resume, before a very long period, the prompt payments which formerly characterized us, when the delay to the depositor never exceeded the time necessary to ascertain, by assay, the value deposited. This was generally two days; but if the deposits were in coins of a well ascertained character, the return was made on the very day of the deposit. In addition to this delay, required by the operations of the Mint, a depositor from New York would be subjected to that necessary for the transport of his bullion to Philadelphia and back, being, at most, but two days more. The loss of interest for this time on the amount which we have supposed might possibly be sent from that city on private account (\$7,500,000) is at most \$2500.

It therefore appears that, estimated in money, the whole advantage of which Philadelphia has at present over New York in securing the coinage of bullion is at most \$8,750. Surely this does not present a case of such hardship as to require for its remedy an annual charge to the government of near \$100,000.

But there are other means of securing the benefits of re-coinage to New York, than the establishment of a Mint, and the consequent, heavy expenditure for buildings, machinery, fixture, salaries and wages; and I shall now briefly indicate the outlines of a plan which while it will extend the usefulness of the Mint at Philadelphia, and prove but a trifling charge to the government, will meet the objects of the memorialists.

The plan I propose should constitute the Asst. Treas. at New York the agent of the U. S. in the receipt of bullion for coinage at the Mint; The Director of the Mint should have authority to contract for the transmission of the same to Phila. at the risk and expense of the U. S., requiring sufficient security of the transporters; the value of the bullion should be ascertained by the Assayer of the Mint and a report of the same sent, without delay to the Asst. Treas. at New York, who should thereupon pay the amount to the depositor from the bullion fund of the Mint previously provided to him.

By such a plan, which is perfectly feasible, all the "expense and risk" to the New York depositor are

avoided; the trifling "delay" required for transmission between the two cities it seems not too much to ask that he should himself submit to.

The annual charge to the government for such an arrangement, including freights, salaries, and incidental expenses, need not exceed \$12,000. Nor is this all. For an amount probably not one-half of the yearly cost of a New York Mint, such agencies might be established, not only there, but in the cities of Boston, Baltimore, Pittsburg and Cincinnati. The Mint at Phila. would continue its functions of manufacturing the bullion, while the owners of specie at various seats of commerce would secure all which can reasonably be asked of government, namely the means of promptly exchanging a foreign for a national currency.

From the foregoing considerations, and others on which I have not touched, it seems to me apparent that there is no necessity for a Mint at New York, so long as the establishment at Phila. is continued. There is not now, nor is it likely there will be, sufficient business to keep both employed. The question, resolved into its naked elements, appears to me simply this; whether New York or Philadelphia shall have the Mint? Considering the present direction of the imports of bullion, it is evident that if Congress shall decide for the former city, the present institution, now in fully equipped and in perfect working order, and standing in the first rank of such establishments, must either be dismantled and vacated, or remain a

useless incubus on the Treasury. On the other hand should the course of that trade change,—should the overland railroad to the Pacific be constructed, and Phila. thus become as is confidently anticipated, the most accessible point of connection between the Atlantic states and the golden region of California, the Mint at New York, if established, would in its turn be supplanted and become useless. But in any case a single Mint is sufficient, and none could be better adapted to the purpose than the present establishment.

R. M. PATTERSON,  
*Director.*

Hon. James Cooper, U. S. Senate  
Washington

A similar request having been made on behalf of the House of Representatives, by Hon. Joseph R. Chandler, of Pennsylvania, a copy of this letter was also sent to him

On the 21st of May, 1850, Dr. Patterson sent to Mr. Chandler the following letter and suggestions for a bill, embodying his views, as a substitute for the establishment of a branch mint at New York.

“In reply to your letter of the 16th, presenting certain queries having reference to the question of the proposed mint at New York, I beg to present the following statement.

“1. *As to the cost of such a mint:* The Branch Mint



at New Orleans which is a plain structure, and built on a lot presented for the purpose by the city, cost prior to the commencement of its operations, the sum of \$312,000. The annual appropriations for its support are about \$60,000. A Branch Mint at New York would probably require much larger appropriations both for its first cost, and for its subsequent support.

"2. *As to the capacity of this mint*—Our experience for the past month is such as to make this no longer a matter of conjecture. I have the pleasure to state that our progress now in all the departments of the mint, is greatly in advance of the work required by the average rate of our deposits for the past six months. Our average during the present month has risen. It is \$2,090,000. having nine working days still unexhausted, during which we expect to bring up the amount to at least \$3,000,000. There is no reason why that rate of coinage should be diminished; on the contrary it will before long be increased. We are now engaged in so modifying our arrangements as to provide for the parting of \$4,000,000. of Cal. gold per month, considering, however, that our average deposits of gold from all sources do not reach \$1,700,000, that the mint is at that time more than competent to the coinage which is required of it.

"3. Your suggestions as to the establishing in New York of a government office for the purchase of bullion is entirely feasible. By this plan all the advantages of a mint could be secured at a compara-

tively moderate expense. This may be readily understood if we consider that the sole object of a depositor of bullion is to receive in coin that legal equivalent of his deposits. He does not concern himself as to the place or manner of its manufacture. If then an office of deposit were opened in New York where the government exchanged coin for bullion on the same terms as at the mint, nothing more could reasonably be demanded. Conceding that such a facility is desirable, it is best for the government to devise the means by which it shall procure the coin required for the purpose. To establish a new mint for their manufacture is certainly one means but to this may be objected that, considering the contingency and high efficiency of the mint at Phila., this expense is hardly justified. The alternative plan is to have the bullion purchased by the government, sent here to be manufactured into coin. To such a plan I can see no practical objection, while the cost would be comparatively trifling."

*"An act authorizing deposits of bullion for coinage at the mint, with the Assistant Treasurer of the United States, at New York*

"1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That it shall hereafter be lawful to make deposits of gold and silver bullion for coinage with the assistant Treasurer of the United States at New York, who is hereby required to weigh

and give receipt for such bullion in the manner and under the regulations provided in the case of deposit as at the mint with the treasurer thereof.

“2. And be it further enacted that the Director of the mint is hereby authorized and required with the approval of the Secretary of the Treasury to make such arrangements by contract or otherwise as may be necessary to secure the safe and speedy transmission of bullion and coins between the assistant Treasurer aforesaid and the mint at Philadelphia provided that the parties engaged to transport such bullion shall before being entrusted be bound to the United States to the satisfaction of the Secretary of the Treasury, for the faithful performance of the duties devolved upon them. And provided further that the expense of such transportation shall be borne by the mint.

“3. And be it further enacted that the assistant Treasurer aforesaid shall as soon as practicable after the receipt of the bullion deposited with him under the terms of this act, forward the same to the mint of the United States at Philadelphia, through the agents selected in accordance with the preceding section that such bullion shall be delivered at the mint with other deposits of coinage. It shall be entered on the books in his name and a receipt given therefore. It shall be assayed and its value ascertained and a detailed memorandum thereof shall be transmitted by the Treasurer of the mint by the assistant Treasurer aforesaid. And it shall be there-

upon the duty of said assistant Treasurer to issue his certificate to the depositor of such bullion for the net amount thereof as determined by the mint, payable at his office to such depositor or order in coins of the same species as that deposited, if the depositor shall so request. The said assistant Treasurer may at his discretion, instead of the single certificate above authorized issue several certificates in such convenient sums as shall in the aggregate make up the whole net value of the deposits. Provided that no certificate shall be for a less sum than \$50 and the same discretion as to the issue of certificates is hereby extended to the Treasurer of the mint and branch mints of the United States.

“4. And be it further enacted that certificates for deposits of bullion issued by the assistant Treasurer aforesaid or by the Treasurer of the branch mints of the United States shall be receivable in payment of all debts due to the United States for the full sum therein certified to be due.

\* \* \* \*

“6. And be it further enacted that with the coins so returned from the mint the assistant Treasurer aforesaid is authorized and required to pay the value of the deposits made with him under the terms of this act. And the Secretary of the Treasury is hereby authorized also to permit the payment of such deposits from any other public money which shall be in the custody of said assistant Treasurer. Provided

that the funds so employed shall not exceed such an amount as in the opinion of said Secretary the state of the Treasury will prudently admit.

“7. And it shall be further enacted that the said assistant Treasurer shall appoint such clerks and workmen as may be necessary to enable him to conduct the duties obligatory by this act, and to the clerks as appointed there shall be allowed such annual salaries as he may determine not to exceed \$1,500 and to the workmen such wages as are customary and reasonable according to their several stations and occupations. Provided that both the appointment and the salary of such clerks shall be first approved by the President of the United States. And provided further that before entering upon their duties they shall become bound to the United States in the sum of \$5,000 with one or more sureties to the satisfaction of the Secretary of the Treasury for the faithful performance of the duties devolved upon them.

“8. And be it further enacted that all laws for the government of the mint and the officers thereof in relation to the receipts, payment and custody of deposits and the settlement of the accounts thereof are hereby made obligatory upon the said assistant Treasurer as the same may be applicable.

“9. And be it further enacted that the sum of \$6,000 is hereby appropriated to the use of said assistant Treasurer out of any money in the Treasury not otherwise appropriated to be applied to the pay-

ment of the salaries and wages herein authorized, to the purchase of scales suitable for the weighing of bullion and coins, and for such incidental and contingent expenses as may arise from the execution of this act. And the sum of \$15,000 is hereby appropriated for the individual and contingent expenses of the Mint of the United States at Philadelphia, to be applied to other available funds in defraying the expenses of transportation of bullion and coins between this mint and the assistant Treasurer aforesaid.

The 10th and subsequent sections of the General Appropriation Act, of March 3, 1853, provided for an Assay office in New York City, which started operations the following year and has continued to function up to the present time.

The Secretary of the Treasury to whom was committed the final approval of matters of detail, wrote to Thomas M. Pettit, who had just become the Director of the mint, on April 21st:

Treasury Department  
April 21, 1853

*Sir:*

The 10th Sect. of the General Appropriation Act of 3rd March last authorizing the establishment of an assay office at N. York provided that the Secretary of the Treasury shall with the approbation of the President of the United States appoint such officers and clerks and authorize the employment of such

assistants workmen and servants as shall be necessary.—Provided their compensation shall not exceed that allowed for corresponding services at the Mint and branches, and the 12th Sect provides that the Director of the Mint, in subordination to the Secretary of the Treasury shall direct the operations see and shall prescribe such regulations etc. as shall be requested to insure faithfulness etc.

It is proposed by the Department to proceed to the establishment of that office with all convenient despatch and that I may act understandingly in the matter I will be pleased to have your views on the subject, and, I will thank you to state the number of officers, clerks, assistants, workmen and servants which, in your opinion, will be necessary to perform, promptly, the duties required, and, the compensation allowed for corresponding services at the Mint.

You will be pleased to submit, also, the regulations under which you may propose to issue silver coins as provided by the 4th Section of the Act of 21st February last.

I am very Respect.

[Signed] JAMES GUTHRIE,  
*Sec. of the Treasury*

Thos. M. Pettit, Esqr.

Director of the Mint, Phila.

Robert Patterson, an employee of the Mint in Philadelphia, and son of a former director, was selected to go to New York and secure a proper

building for the Assay Office, and on May 19 1853, he wrote to the Secretary of the Treasury suggesting that Mr. Franklin Peale go with him.

Mint of the United States  
Philadelphia, 19 May 1853

*Sir:*

Since the conference which I had the honor to hold with you in reference to the New York assay office, it has occurred to me that it may be more satisfactory to the department, as it will be more agreeable to myself, to have the benefit of the judgment of some other competent person in addition to my own, upon the fitness of the buildings proposed for the new establishment. I therefore respectfully suggest that our Chief Courier, Mr. Franklin Peale, is more thoroughly qualified to form a reliable opinion on such a matter than any one known to me, and if you see no objection, I should be gratified to have your authority to request him to accompany me on my visit of examination to New York. I the more willingly propose this since, in the event of the building being selected, it will, I am sure be to the advantage of the government to secure the services of Mr. Peale in proposing drafts and descriptions for the interior alterations necessary to adapt them to the new object designed, and it is better that he should have an opportunity of personally examining the structures.

I shall probably leave for New York early next week, and shall deem it a favor to receive an early



reply to this letter, so that if Mr. Peale's visit be authorized I may be able to mention the subject to him in due time.

With great respect

Your obt. serv

[Signed] ROBERT PATTERSON

The building selected, No. 15 Wall Street, had been built in 1824, by the Branch Bank of the United States, which occupied it until 1836, when it was sold to the Bank of the State of New York. The Bank of Commerce of New York took it over in 1842, bought it in 1844, and occupied it until 1846, when the United States government leased it for the Sub-Treasury, and in 1854 it was purchased for the newly established assay office. The Sub-Treasury continued to occupy a portion of the building until 1863, when it moved to the building next door, which was also owned by the government.\*

The Secretary of the Treasury wrote to the Director of the Mint, on September 11th and 14th, regarding various details:

Treasury Department  
Sept. 11—1853

*Sir:*

The building of a house for the accommodation of the assay office in New York has been commenced, a plan and description of which I shall instruct the

\* Stokes, I. N. Phelps, *Iconography of Manhattan Island*, 6 vols., 1913–1922.

superintendent architect in New York to transmit to you. The building will probably be finished some time about the beginning of December and it is desirable that the machinery should be then completed and ready for it. As I desire all the machinery, apparatus, etc. to be constructed in Phila and under your direction, I will thank you to send me a bill of particulars of the articles required together with an estimate of the cost.

Dr. John Torrey has been appointed assayer, and Dr. Jedediah Cobb—melter and refiner of the said office. I have advised both these gentlemen to visit Phila to examine and make themselves acquainted with the processes in the mint of their respective branches of business, and also to select their workmen in order that they may receive some preparatory instruction and training. I have ventured to assure both gentlemen that you will afford them every facility in your power for the purpose in view, which I hope you will do upon their presenting the letters which I have requested them to deliver by way of introduction.

Dr. Torrey will also consult you as to a fit person to be appointed his assistant and I will also thank you to give some consideration and attention to that subject.

I remain resp.

[Signed] JAMES GUTHRIE,

*Secy of the Treasury.*

J. R. Snowden Esq.

Director of the Mint, Phila.

Treasury Department  
Sept 14 1853

*Sir:*

In reply to your letter of the 13th inst relative to the machinery and apparatus required for the assay office at New York, I have to say that in my opinion it should be equal to from forty to sixty millions. If the demand go beyond that am't. there must be further provision for the excess but it is highly probable that the branch in California will do a portion of the business, and it is even possible that the melting and refining may pass into the hands of private enterprise. On the whole, I think therefore the capacity named is the safest estimate, which can now be made to guide you in the preparation of the machinery.

I remain resp.

[Signed] JAMES GUTHRIE,  
*Sec Treasury.*

J. R. Snowden Esq.  
Director Phila.

Mr. James Ross Snowden became Director of the Mint in June, 1853, and held that office until 1861; these letters were therefore addressed to him.

In February, 1860, another attempt was made to establish a branch mint in New York, by the introduction of a bill to that effect in the House of Representatives, which was referred to the Committee of

Commerce, and, by that Committee, to the Secretary of the Treasury for his opinion, and by him to Mr. Snowden for his views on the subject:

“Sec. 1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That a branch of the mint of the United States shall be established at the City of New York for the coinage of gold and silver, and for the purpose of erecting suitable buildings, and completing the necessary combinations of machinery for the branch mint aforesaid in connection with the assay office located in said city the sum of . . . . dollars to be paid out of any money in the Treasury not otherwise appropriated, shall be and is hereby appropriated for that purpose.

“Sec. 2. And be it further enacted, that so soon as the necessary buildings are erected and the necessary combinations of machinery perfected for well conducting the business of the said branch mint, the following officers shall be appointed upon the nomination of the President of the United States, and with the advice and consent of the Senate: one Superintendent, one Treasurer, one Assayer, one Chief coiner, one melter and one refiner. And the Superintendent of said branch mint shall engage and employ as many clerks and as many subordinate workmen and servants as shall be provided for by law; and the salaries of the said officers and Clerks shall be as follows:

“To the Superintendent the sum of twenty-five hundred dollars per annum;

“To the Treasurer the sum of two thousand dollars per annum;

“To the Chief coiner, Assayer, melter and refiner, the sum of two thousand dollars each per annum;

“To two clerks the sum of one thousand four hundred dollars each per annum;

“And to the subordinate workmen and servants not exceeding twenty in number, such wages and allowances as are customary and reasonable, according to their respective stations and occupations. And for the purpose of paying the said salaries, wages, allowances, and the incidental expenses of the said branch mint, for the year ending the thirtieth day of June 1860, the sum of thirty-five thousand dollars be appropriated hereby, out of any money in the treasury not otherwise appropriated.

“Sec. 3. And be it further enacted. That the Officers and clerks to be appointed under this act, before entering upon the duties thereof shall take an oath or affirmation before some Judge of the United States, faithfully and diligently to perform the duties thereof, and shall each become bound to the United States of America, with one or more sureties, to the satisfaction of the Director of the Mint, and the Secretary of the Treasury, with condition for the faithful and diligent performance of the duties of their several offices.

“Sec. 4. And be it further enacted. That the general direction, of the business of the said branch of the Mint of the United States, shall be under the control and regulation of the Director of the United States Mint at Philadelphia, subject to the approbation of the Secretary of the Treasury; and for that purpose it shall be the duty of the said Director to prescribe such regulations, and require such returns periodically and occasionally as shall appear to him to be necessary for the purpose of carrying into effect the intention of this act in establishing the said branch mint; also for the purpose of discriminating the coin which shall be stamped at said branch, and at the mint itself; also for the purpose of preserving uniformity of weight, form, and fineness in the coins stamped at each place; and for that purpose, to require the transmission and delivery to him, at the United States Mint at Philadelphia from time to time such parcels of the coinage of said branch mint as he shall think proper, to be subjected to such assays and tests as he shall direct.

“Sec. 5. And be it further enacted, That all the laws and parts of laws made for the regulation of the Mint of the United States, and for the government of the Officers and persons employed therein, and for the punishment of all offences, connected with the mint or coinage of the United States, shall be and the same are hereby declared to be in full force, in relation to the said branch of the Mint of the United States

by the act established, so far as the same shall be applicable thereto."

On the 5th of March, 1860, the Hon. Thomas B. Florence of Pennsylvania, sent the following letter to the Director of the Mint:

H of R of the U. S.

Washington March 5 1860

*My dear Col*

There is a very determined and zealous effort being made to have the *power to coin* given to the Assay Office in the City of New York. We must foil this deep laid scheme, and to do so I must have all the information you can give me, and statistics and reasons why it should not be conferred. Will you do me the favor to furnish me these at the earliest moment. We are in danger, and the sooner effort is made to avert the evil the more likely to frustrate the design.

Truly your friend

[Signed] THOMAS B. FLORENCE.

Mint Mar 7—1860

*My dear Colonel:*

When I received yesterday your favor of the 5th inst. I had nearly completed a full communication to the Secretary of the Treasury on the subject of the proposed branch mint at New York. Several days ago he wrote to me and asked my views on the expediency of the measure, the cost of putting it into

operation and of carrying on its operation etc. I completed yesterday my responses to his inquiries and presented them to the Department. I think it probable he will send my communication to the Committee on Commerce to which Com. the bill was referred. I think my answer ought in some way be brought before the members of both Houses, and I leave it to your judgment to indicate the best mode for affecting this. Perhaps it would be well to wait for a few days to see what course the Secretary will take. I have reason to believe he will not recommend the measure, as its inexpediency, I think, is clearly shown in my communication. Besides, it would cost the government at least one million dollars to establish and an annual outlay of 125 or 130 thousand to carry it on, whereas the public is here as well served, as it would be by the establishment of a branch mint, at the annual expense of less than \$9,000 per annum, without any delay in paying depositors except what would occur if a branch mint were established. If after you have seen my letter to the Secretary you think of any points to be presented and answered I will be happy to respond to them at once. Thanking you for your prompt letter on the (to Phila. to my state, and indeed to the whole country) important subject/ I am as ever/ with great regard/

Yours truly

[Signed] JAMES ROSS SNOWDEN.

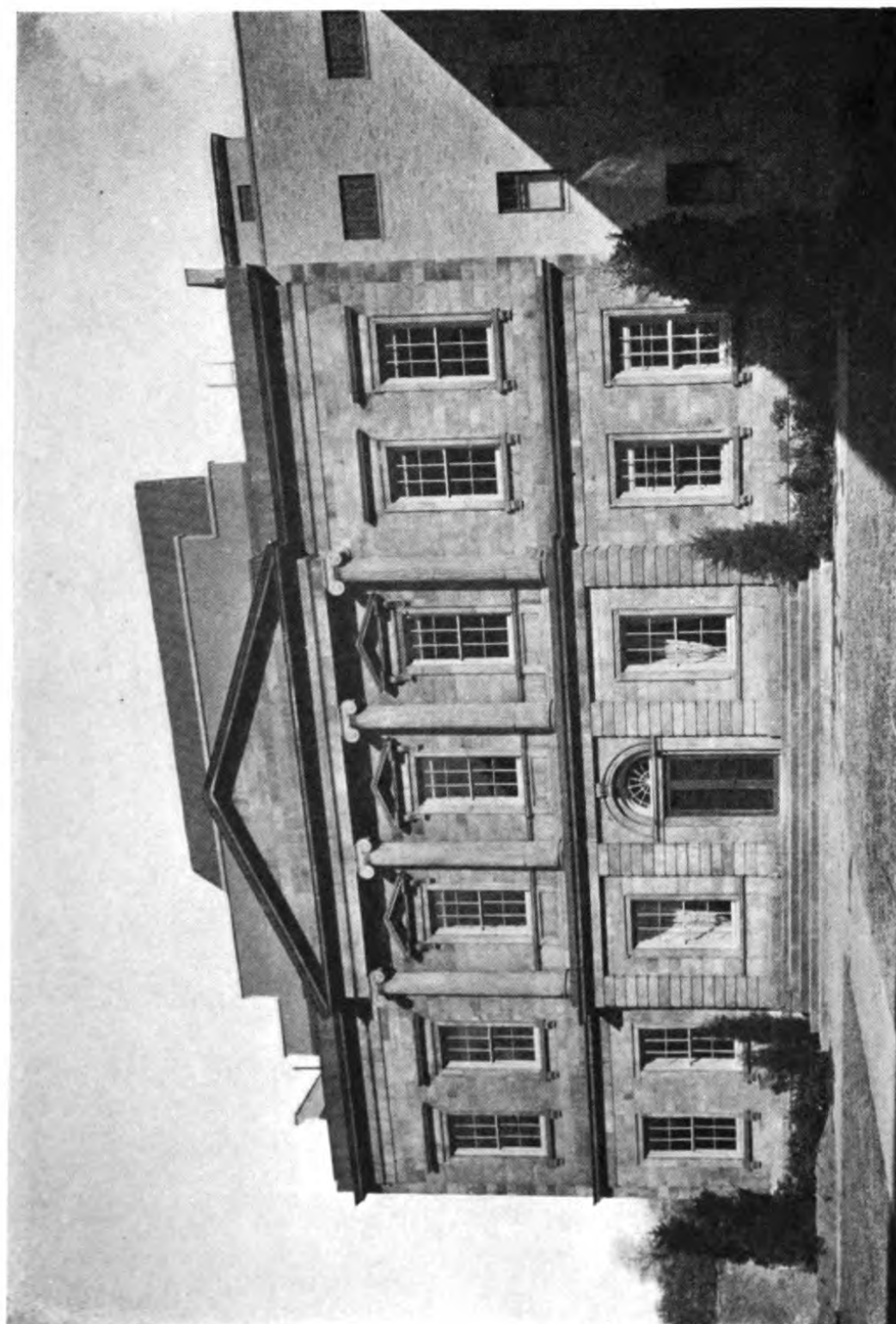
To Hon. Thomas B. Florence  
House of Reps/ Washington City



This, like former efforts, did not become a law, and the assay office continued to attend to such business as came its way.

In 1919 and 1920, the building was torn down and rebuilt. Through the initiative and generosity of Mr. and Mrs. Robert W. de Forest, the front of the old building became the facade of the American Wing of the Metropolitan Museum of Art of which Mr. de Forest is President. The American Wing was completed and opened in November, 1924. The frontispiece shows the building in its original location—the illustration opposite, its present appearance as part of the structure of the Metropolitan Museum of Art.

I wish to express my gratitude to Miss Mary M. O'Reilly, the Acting Director of the Mint, for her kind permission to examine these documents, and to Miss Corinne Belden for much clerical assistance.



FAÇADE OF AMERICAN WING, METROPOLITAN MUSEUM OF ART.





MEDALLIC PORTRAIT OF ROBERT M. PATTERSON.







MEDALLIC PORTRAIT OF JAMES ROSS SNOWDEN.





VIEW OF PHILADELPHIA MINT, 1859.











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11/19

# NUMISMATIC NOTES AND MONOGRAPHS

No. 46



## THE KÜCHÜK KÖHNE HOARD

BY

EDWARD T. NEWELL

THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
NEW YORK  
1931

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# THE KÜCHÜK KÖHNE HOARD

BY

EDWARD T. NEWELL



THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
NEW YORK  
1931



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## THE KÜCHÜK KÖHNE HOARD

The little hamlet of Küçük Köhne, closely surrounded by ancient *hüyüks* and other vestiges of pre-classical as well as classical remains,<sup>1</sup> is situated just across the Eyghri Özü river in a southwesterly direction from the modern town of Köhne, Vilayet of Yozgat, in central Anatolia. There, sometime in the early part of 1930, was unearthed by persons unknown a small earthenware pot containing twenty-eight ancient silver coins dating from the last half of the Fourth Century B.C. These coins had been variously struck in the mints of Sinope, Amisus, and Tarsus. The hoard was seized by a member of the local Turkish Gendarmerie who transmitted it into the hands of his superior officer stationed at Köhne. There the hoard was seen and secured by Dr. H. H. von der Osten<sup>2</sup> in charge of the Anatolian Expedition of the Oriental Institute of the University of Chicago. The coins were then cleaned of their accumulated dust and, together with the fragments of the pot, photographed. Eventually the entire hoard was taken to Ankara<sup>3</sup> and delivered by Dr. von der Osten to His Excellency Aziz Bey, Director of Antiquities of the Ministry of Public Instruction.

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The earthenware vessel, which once contained our little hoard, was indeed badly smashed by its finder, but fortunately enough of the fragments remain to allow of a partial reconstruction which gives an idea of its original shape and size (cf. Plates I and II). The measurements and description are as follows:

Height.....	83 mm.
Diameter of the Body....	90 mm.
Diameter of the Bottom..	51 mm.
Thickness.....	4 mm.
Condition.....	Fragmentary.
Quality.....	Buff ware.
	Wheel made.
	Grit tempered.
	Wet smoothed.
Decoration.....	Vertical ribbing on the upper third of the body as far as the neck; four small rounded protuberances equally spaced around the vessel just above the median body bulge.
Handle.....	None.
Rim.....	Missing.

Obviously, and as actual experiment has shown, the twenty-eight coins would not half fill the pot. On the other hand, it has been definitely stated that no more than these twenty-eight coins were actually found. Although such matters are, obviously, very difficult to control, the writer has taken the statements at their face value and has assumed them to be substantially correct.

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The contents of the pot as reported comprise the following varieties.

### AMISUS IN PONTUS

4th Century B.C.

Persian Sigli

- 1-3. *Obverse.* Head of Hera or of the nymph Amisus to l. wearing turreted stephane (adorned with flower and rosettes), triple pendant earring and necklace. Circle of dots.

*Reverse.* Owl with wings spread, facing and perched upon a shield. On the l., club. In the field, ΔΙ-ΟΓ. In the exergue, ΓΕΙΡΑ. On no. 1 the symbol is "off flan." No. 2 has a deep chisel cut.

Cf. *Recueil*,<sup>4</sup> 2nd Ed., p. 54, no. 1.

4. *Obverse.* Similar to the preceding.  
*Reverse.* Similar but with no symbol visible. The magistrate's name is ΜΥ-ΛΛ. Chisel cut.

### SINOPE IN PAPHLAGONIA

Before *circa* 360 B.C.

Light Aeginetan Drachms

5. *Obverse.* Head of the nymph Sinope to l. wearing sphendone. Circle of dots.

*Reverse.* Eagle with spread wings standing to l. upon a dolphin. In upper r. field, ΓΑΞ (the last letter is uncertain). In the exergue, ΞΙΝΩ. Two chisel cuts.

*Recueil*, p. 198\*, no. 20.

*Circa* 360-320 B.C.

6. *Obverse.* Head of the nymph Sinope to l. wearing sphendone, triple drop earring and necklace. In front, Aplustre. Circle of dots.

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- Reverse.* Eagle to l. on dolphin as above. Magistrate's name, APIΞTO. Chisel cut.  
*Recueil*, p. 200\*, no. 22.
7. *Obverse.* Similar  
*Reverse.* Similar, but magistrate's name, AΞT (=AΞTYO?). Chisel cut.  
*Recueil*, p. 200\*.
8. *Obverse.* Similar.  
*Reverse.* Similar but magistrate HPΩN. Chisel cut.  
*Recueil*, p. 193\*\*.
- 9-12. *Obverse.* Similar.  
*Reverse.* Similar but magistrate ΘEOTI. Nos. 9, 10 and 11 have chisel cuts.  
*Recueil*, p. 193\*\*.
13. *Obverse.* Similar.  
*Reverse.* Similar but magistrate KAAAI(A?).  
*Recueil*, p. 193\*\*.
- 14-16. *Obverse.* Similar.  
*Reverse.* Similar but magistrate KAPΓO. Chisel cuts.  
*Recueil*, p. 193\*\*.
- Obverse.* Similar.
17. *Reverse.* Similar but magistrate ΦAΓE(TA?).  
*Recueil*, p. 193\*\*.
18. *Obverse.* Similar.  
*Reverse.* Similar but magistrate Ψ-----TI? (the chisel cut, combined with the dimness of this part of the photograph, makes the letters of the name impossible to read). Chisel cut.

#### TARSUS IN CILICIA

Mazaeus, 361-333 B.C.

Persic Staters

19. *Obverse.* Baaltars, naked to waist, seated to l. upon a *diphros*, holding an eagle upon his out-

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stretched r. and resting his l. upon a sceptre. His wreath-encircled head is facing. On the r., בעלתו. On the l., נ. Circle of dots.

*Reverse.* Lion attacking a bull to l. Above, מור. Below, דד. Linear circle. Chisel cut. Myriandros,<sup>5</sup> p. 9, Series III, Group A, no. r.

20. *Obverse.* Similar, but in addition to the eagle Baaltars also holds a bunch of grapes and an ear of barley. On the l., מ. Circle of dots.

*Reverse.* Similar, but the letters of the inscriptions are composed of dotted lines. Chisel cut. Myriandros, p. 10, Series III, Group C, no. u.

- 21–22. *Obverse.* Similar. On the l., ר. Beneath *diphros*, מ. Circle of dots.

*Reverse.* Similar. מור in plain letters. No letters beneath the bull. Circle of dots. Chisel cut. Myriandros, p. 13, Ser. V, no. dd.

23. *Obverse.* Similar. On l., indistinct letters, possibly תנ (?). Beneath *diphros*, מ. On the r., between the body of Baaltars and his sceptre, an uncertain letter or symbol. The photograph is none too sharp at this particular spot and only from the coin itself could one determine the exact significance or nature of this enigmatic letter.

*Reverse.* Similar to the preceding. Chisel cut.

Myriandros, p. 13, Ser. V, no. ee.

24. *Obverse* Baaltars seated to l. on *diphros*. His l. arm, wrapped in his mantle, rests upon his hip, while with his r. hand he holds a long, eagle-tipped sceptre. Before him, ear of barley and bunch of grapes. On the r.,

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בענתרו. On the l., נ. Beneath *diphros*, מ.

*Reverse.* Lion to l., attacking bull to r. above a double row of crenellated walls. Above, מזרי זי על עברנהרא וחנך. Chisel cut. Myriandros, p. 14, Series VI, Ser. B, no. ii.

Under Alexander the Great  
Circa 327–320 B.C.

25. *Obverse.* Baaltars seated to l. on *diphros*, his l. arm wrapped in his mantle, his r. hand holding a lotus-tipped sceptre. In the l. field, ear of barley and bunch of grapes. Beneath *diphros*, M. A chisel cut renders somewhat uncertain the possible presence behind Baaltars of the letter B or an ivy leaf. Probably this part of the field was plain. Circle of dots.

*Reverse.* Bust of Athena in triple-crested Attic helmet, nearly facing and inclined slightly to the l. She wears earring and necklace. Circle of dots. Chisel cut.

Tarsos,<sup>6</sup> p. 110, Ser. II, no. j.

26. *Obverse.* Similar but in r. field, B above ivy leaf. Beneath *diphros*, T.

*Reverse.* Similar. Chisel cut.

Tarsos, Ser. II, Fourth Group, no. r.

27–28. *Obverse.* Similar but in r. field, ivy leaf above B. Beneath *diphros*, T.

*Reverse.* Similar but in l. field, Corinthian helmet. Chisel cut.

Tarsos, p. 43, Ser. II, Fourth Group, no. t.

As may be seen by a glance at the plates all the coins in our hoard were, barring the test cuts, in

uniformly fine condition, that is, only slightly circulated or not at all, and with surfaces untouched by corrosion. Obviously the coins had circulated from hand to hand but little before being consigned by their former owner to the clay receptacle in which they were ultimately found.

The four coins (nos. 1-4) from the mint at Amisus require little comment except to remark in passing that only two of them have been tested in antiquity for a suspected copper core. This may mean something in the light of the present writer's own collection, whose ten Amisian sigli show no test cuts whatever. Similarly, in the *Recueil*, of the two hundred and twenty-six <sup>7</sup> specimens there described (nos. 1-6) no less than two hundred and thirteen are without chisel cuts and only thirteen with. Even if the compilers were not always scrupulously exact <sup>7</sup> this great disproportion between the tested and the non-tested pieces is very striking indeed. As we shall see, the Amisian issues would appear to have enjoyed a higher reputation in ancient times for their honesty than the contemporaneous ones of either Sinope or Tarsus.

Wroth, in the British Museum Catalogue, Pontus, etc., p. 13, divides the early inscribed issues of Amisus into two groups which he dates "*circ.* B.C. 400-360" and "after *circ.* B.C. 360" respectively. Our nos. 1-4 all belong to Wroth's second group. He is surely right in thus dis-



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tinguishing two styles, and his dating for coins similar to ours cannot be far wrong as indicated by their presence in the Küçük Köhne hoard. The *Recueil* more vaguely assigns them all, without distinction of style, to "*IV<sup>e</sup> Siècle avant J.C.*"

The fourteen specimens from the Sinope mint in our hoard fall into two groups. The earlier is represented by but one example, no. 5. This particular group is characterized by the absence of the *aplustre* symbol on the obverse and, following the *Recueil*,<sup>8</sup> may be assigned to the first part of the Fourth Century B.C. With regard to the actual specimen in the Küçük Köhne hoard, its general style is so poor, the details thick, clumsy and ugly, the letters uncertain, uneven and so badly made that the coin may well be considered as a barbaric copy of the genuine issue. Even in ancient times its authenticity seems to have been especially questioned as it is the only coin in the entire hoard that has been disfigured by two chisel cuts. One cut was deemed sufficient to prove the honesty of the remaining pieces.

The thirteen other drachms from Sinope all belong to the group bearing the *aplustre* symbol and further characterised by the triple pendant to the nymph's earring. This group is assigned by the authors of the second edition of the *Recueil* to the period between 360 and 320 B.C.<sup>9</sup> Our hoard provides an important service in coming now to prove unequivocally that this revised dating is

certainly correct as against the earlier assignment of these same coins to 322–220 B.C.,<sup>10</sup> or even as against Six's <sup>11</sup> dating of *circa* 333–306, which dating was later followed by Wroth in the British Museum Catalogue. As we shall see later the Küchük Köhne hoard could not have been buried after 320 B.C.<sup>12</sup> at the latest, and may even have been in the ground for a few years previous to this date.

The thirteen specimens of the group before us bear the names of eight magistrates, unfortunately however not including that of IKEΞIO (Hikesios, father of Diogenes the Cynic), the presence of whose name on this series was the determining factor in persuading the authors of the *Recueil* to revise the datings of this group.<sup>13</sup>

Three of the fourteen drachms of Sinope before us lack chisel cuts. Of the four specimens of the same type in the writer's collection one bears a chisel mark, while of the one hundred and fifty examples listed in the *Recueil* two are *fouillée*, one hundred and thirty-two are undamaged and sixteen have test cuts—in each case a much higher percentage than shown by the extant coins of Amisus.

Coming now to the Persic staters (nos. 19–24) of Mazaeus it may be noted that all belong to his later issues, no specimen bearing the lion and stag type <sup>14</sup> being present in the hoard. Following the arrangement proposed by the writer some years

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ago<sup>15</sup> our no. 19 may be assigned to Series III, Group A; no. 20 to Series III, Group C; nos. 21–3 to Series V and no. 24 to Series VI, Group B of Mazaeus' numerous and prolific issues produced at Tarsus. The latest coin of this group, bearing the bull and lion type above the walls of Tarsus, undoubtedly immediately preceded the issue in that city of Alexander's well known coins.<sup>16</sup> Our no. 24, then, may be assigned to *circa* 336–333 B.C., while nos. 19–23, which by all criteria of style and fabric must have preceded it, may cover the years *circa* 345–336 B.C.

Somewhat better preserved—to judge by our photographs—and therefore presumably later than nos. 19–24, come the four Persic staters (nos. 25–8) bearing the facing bust of Athena. In a study of the Alexandrine issues at Tarsus<sup>17</sup> the present writer, on purely technical grounds, assigned similar coins to the years after *circa* 327<sup>18</sup> and before 320/19 B.C., and there stated his further personal opinion that they probably came soon after 327 B.C. The appearance and condition of the four specimens in the Küçük Köhne hoard support although they do not necessarily prove the contention. Really definite proof of a post-Alexandrine date for these Athena staters is to be found in the position of Baaltars' legs. They are not placed parallel to each other as on all earlier coinages as well as on the earliest issues of Alexander himself, but the right leg, from the knee

downward, is drawn back behind the left. This scheme was not introduced upon Alexander's issues until *circa* 326–5 B.C. at the very earliest.<sup>19</sup> Much earlier than that date the Athena type Persic staters could not well be, and they therefore represent the latest coins in our hoard which can be closely dated. As two of them, nos. 25 and 27, display some faint signs of abrasion on their highest points, i.e. on the helmet visor as well as on the nose and lips of Athena, these particular specimens must have been in circulation for at least a little time before their burial. Taking all of these factors into consideration we appear justified in placing the burial of the hoard somewhat roughly between *circa* 325 and 320 B.C. By the last of these dates the leading authorities are now agreed that the sigli of Amisus, the drachms of Sinope and the staters of Tarsus had all alike ceased to be coined.

On the other hand, the acceptance of such a date for the interment of the Küchük Köhne hoard causes certain interesting if minor anomalies to appear. Particularly noticeable is the fact that it contained no coins of Alexander the Great, although his important mint of Tarsus—the most natural source of coinage supply for the lands to the north of the Taurus Mountains—had commenced coining with the new types immediately after his arrival in Cilicia in the spring of 333 B.C.<sup>20</sup> However, as the present writer has tried

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to stress in his study of the Tarsian mint under Alexander,<sup>21</sup> these Alexandrine issues represented an imperial undertaking meant for the pay of the army of occupation in Cilicia and to facilitate commercial transactions with the remainder of the empire. But neither Cappadocia nor the adjacent lands to the north as far as the Black Sea were at this time actually part <sup>22</sup> of the empire, though theoretically they may have been generally considered so. Furthermore, Alexander's mints in Asia Minor were, during his life time, situated only on the very outermost western and southern fringes of that district, i.e. at Lampsacus, Miletus, Side (or Phaselis?) and Tarsus.<sup>23</sup> It is probable that years may have elapsed before his coins were circulating at all freely in the highlands and over the central plateau of Anatolia. Especially would such be the case during the years when Ariarathes I was maintaining in that district an independent kingdom practically in defiance of the Macedonian power. The Pontic cities seem not to have coined with Alexandrine types until well on in the Third Century B.C. and it is still very uncertain if such coins were ever struck in the fastnesses of Anatolia—though *imitations*, apparently, commenced to be made there in and around 300 B.C.<sup>24</sup> It is highly questionable if before 322 B.C. many Alexandrine coins could have penetrated as far as the countryside about Küchük Köhne, certainly not in sufficient numbers

to be in any general circulation there. The circulating medium during the reign of Ariarathes I would obviously still remain just the type of coins which our burial-pot contained—coins which for years had constituted the accustomed media of exchange along the inland highroads<sup>25</sup> of commerce which linked the Mediterranean and Pontic Seas. The mere absence from our hoard of any coins bearing Alexander's name and types does not therefore necessarily imply that the hoard must have been buried before the time of Alexander's arrival in Asia Minor.

More surprising appears to be the total absence of the half staters (Persian sigli) bearing the types of Baal Gazur on the obverse and the griffin attacking the stag on the reverse which Ariarathes I struck in his capital of Gaziura.<sup>26</sup> One might well have expected that a hoard which obviously dates from about the period of his lifetime and was buried at a spot within his dominions not sixty-five Roman miles<sup>27</sup> (by road about ninety kilometers or fifty-six miles) southwesterly from his capital Gaziura, would assuredly have contained at least one specimen of his own royal issues. Neither does the hoard contain a single example of Ariarathes' imitations of the Sinope type, bearing his name in Aramaic letters אריורת in place of the usual  $\Sigma\text{IN}\Omega$ .

Three possible assumptions to explain these discrepancies are open to us. Either the hoard was

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buried before Ariarathes I became sufficiently independent to dare to assume coinage rights, or the coins in question were not struck by Ariarathes I but by his son and eventual successor Ariarathes II, or—if the latter supposition be considered absolutely untenable—there may have existed some special reason why the former owner of our *peculium* saw fit to reject from it the issues of his lord and master in favor of the more widely circulating coins of Sinope, Amisus and Tarsus.

Before discussing and eventually adopting one or the other of these three explanations we should consider, very briefly, the probable regnal years of Ariarathes I, as they have some bearing upon the subject. Most historians follow the opinion that he ruled Pontic Cappadocia (either as local dynast or Persian Hyparch with his capital at Gaziura) from the days of Artaxerxes Ochus down to *circa* 331 B.C. when, during the confused times attending Alexander's invasion of Asia, he was successful in adding to his dominions also the territories of Southern Cappadocia.<sup>28</sup> Théodore Reinach,<sup>29</sup> however, considered his reign to have commenced as late as 332–330 B.C. All writers are agreed in following Diodorus' account that in 322 B.C. Ariarathes I was finally captured and crucified by Perdiccas, who had invaded his territories for the express purpose of delivering them over to Eumenes as their accredited Satrap. As few historians have accepted Reinach's theory with re-

gard to the commencement of Ariarathes' reign it would appear preferable to follow the majority opinion according to which Ariarathes I was indeed the octogenarian of Lucian's *Macrobii*, having been born *circa* 404 B.C., that he ruled for many years at Gaziura in Pontic Cappadocia and that later, taking advantage of the troublous conditions brought about by Alexander's expedition, he acquired Southern or Tauric Cappadocia, which he ruled until his death in 322 B.C.

Because of the conflicting views of his historians the coins of Ariarathes have been assigned to extremely divergent periods of his reign. W. H. Waddington<sup>30</sup> attributes them to *les vingt dernières années environ de la monarchie persane, ainsi que pendant le règne d'Alexandre*. Reinach, because of his own theories, assigns both the Sinope<sup>31</sup> and the Gaziura<sup>32</sup> types to the years *circa* 331–322 B.C. only. Head's *Historia Numorum*, 2d Edition,<sup>33</sup> follows Reinach in this as does also Wroth for the Gaziura<sup>34</sup> type but not for the Sinope<sup>35</sup> type where he elects to follow the old dating of 341–333 B.C. for these particular pieces. Babelon, on the other hand, assigns the Sinope<sup>36</sup> type to the period 350–340 B.C. and the Gaziura<sup>37</sup> type to the period of his full independence between 331 and 322 B.C. Lately Mr. E. S. G. Robinson, in discussing a hoard of earlier Sinopean drachms,<sup>38</sup> says: "It, therefore, seems probable that his (Ariarathes') earliest issues are to be dated



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not many years before the conquest of Alexander, and the bulk of his money may even belong to the period of his attempted independence, 328–322.”

In examining the arguments of these various students one fact soon becomes apparent, namely that without exception they all appear to assume—most of them categorically, a few with somewhat veiled hesitancy—that the Sinopean types of Ariarathes, as well as the similar coins of his unknown predecessor, one Abdssn, were all actually produced at Sinope itself. Considerations of style and fabric make any such supposition appear highly problematical to the present writer. The second edition of the *Recueil* does, however, make an important stride forward when it discards the quite impossible earlier opinion that the autonomous drachms of Sinope which bear the aplustre ornament on their obverses succeeded the similar issues with Aramaic inscriptions of Abdssn and Ariarathes. Every criterion of style proves clearly that the hard, dry, lifeless and rather weak die-cutting of the latter can only be explained by supposing that they were produced in imitation of the much finer autonomous Sinopean coins. Compare figs. 1, 2, and 3 (representing typical specimens of these Aramaic coins in the writer's collection) with the true Sinopean examples from our hoard illustrated on Plates III and IV. If these Aramaic coins had been produced immediately preceding or im-

mediately succeeding the true issues and at Sinope itself—as previous writers all suppose—there seems to be no valid reason why the former should not have been similar in style and the equal in excellence of the latter. The Sinopean issues of the Persian Datames present a case in point. His issues,<sup>39</sup> bearing his name in *Greek* characters,



Fig. 1.



Fig. 2



Fig. 3



Abd SSN



Ariarathes I



are so identical in style and fabric with the city's own contemporaneous issues that no competent numismatist would hesitate in supposing them to have been produced by any but Sinopean engravers. In comparison with *their* prototypes, the coins of Abdssn and Ariarathes appear to be obviously the products of other than Sinopean die cutters and, therefore, issued elsewhere in direct

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imitation of the well known and widely accepted coinages of that city. The employment of Aramaic instead of Greek letters for the inscriptions—in comparison with the procedure of Datames in a similar case—suggests if it does not actually prove our contention that the former coins were made by non-Greek die cutters and at some other mint or mints.

It seems clear that the Sinopean autonomous issues which bear the *aplustre* in the field, in front of the nymph's head wearing a triple pendant earring, must immediately follow (*circa* 350 B.C.) the latest issues of the plain type as described by Mr. Robinson on pp. 14–5 of his article mentioned above. How long this *aplustre* series lasted can hardly as yet be definitely determined. In view of the fact that the names of at least thirty-five different magistrates are known to have signed the coins we may safely follow the *Recueil* in continuing them down to at least *circa* 320 B.C. In the meanwhile, the petty dynasts or aspiring satraps Abdssn and Ariarathes, desiring to issue money of their own, did so—employing types which did not need advertising or explanations. Theirs was an obvious procedure of which countless similar instances are known in the coinages of all ages and climes.

With regard to Ariarathes, the obvious supposition lies to hand that he imitated the contemporaneous issues of Sinope while he was still petty

dynast or Persian Hyparch of Pontic Cappadocia at Gaziura. This imitative coinage would have commenced before his acquisition of Southern Cappadocia and may even have continued for a little while after that important event. These coins were then followed by his more pretentious Baal Gazur half staters, after he had widened his dominions so as to embrace all Cappadocia. These royal coins were of course direct imitations of the satrapal issues of Mazaeus at Tarsus, which latter coins our hoard proves were still circulating in central Anatolia as late as the last quarter of the Fourth Century B.C.

Our reasoned opinion has been stated above that the contents of the pot found near Küçük Köhne indicate that it could not have been buried before 333 B.C., probably nearer 325–320 B.C. Hence it must have been interred after the first appearance of Ariarathes' Sinopean imitations. All modern numismatists, with the single exception of the historian Droysen,<sup>40</sup> are agreed in assigning these coins to Ariarathes I rather than to the second of that name who ruled from 301–280 B.C. The same is true of the Baal Gazur type, which would hardly have been adopted as late as Ariarathes II's reign, by which time the prototypes of Mazaeus at Tarsus must surely have all but totally disappeared from commerce in favor of the now rapidly spreading Alexandrine coinages. Thus two of the three possible explanations en-

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visaging the curious absence from the hoard of Ariarathes' own coins have been removed.

There remains then the third alternative, namely that the former owner of the hoard must have had some special reason for eliminating Ariarathes' issues from his pot. Now it is a well known fact, commented upon by scholars,<sup>41</sup> that these imitation Sinope drachms of Ariarathes (as also those of Abdssn) average distinctly lighter than the general run of similar drachms certainly struck at Sinope. Considering only those drachms of Sinope characterised by the presence of the *aplustre* we find the weights of eighty-three <sup>42</sup> specimens given in the *Recueil*. To these have also been added the weights of four specimens in the writer's collection. These eighty-seven coins weigh a total of grammes 506.52, or an average of grammes 5.821 each. The following "Frequency Table" tends to show that the *intended* weight of these Sinopean drachms lay somewhere between the ranges of 5.80 and 6.10 grammes each. The sigli of Amisus, while averaging less than do the contemporaneous coins of Sinope, are also distinctly higher than the imitations of Sinope issued by Ariarathes. Again referring to the *Recueil* <sup>43</sup> we find two hundred specimens whose weights are recorded, and adding to these the weights of nine specimens in the writer's collection, we secure a grand total for the

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### FREQUENCY TABLE FOR DRACHMS OF SINOPE WITH APLUSTRE SYMBOL

Weights	Numbers
Above 6.10 grammes.....	4
6.09 to 6.00   "   .....	19
5.99 to 5.90   "   .....	20
5.89 to 5.80   "   .....	15
5.79 to 5.70   "   .....	8
5.69 to 5.60   "   .....	9
5.59 to 5.50   "   .....	1
5.49 to 5.40   "   .....	4
5.39 to 5.30   "   .....	4
5.29 to 5.20   "   .....	3
	—
	87

two hundred and nine coins of grammes 1150.00, or an average of grammes 5.502 per coin.

In striking contrast to the above results come the weights of the drachms struck by Ariarathes in imitation of the Sinope type. The twenty-four specimens whose weights have been recorded in the *Recueil*,<sup>44</sup> plus two specimens in the writer's own collection, give a total of grammes 134.53 for the twenty-six coins, or an average of grammes 5.174 per piece. This result, however, includes the rather exceptional weight recorded for one piece, namely grammes 5.91. There is reason to believe that this unusually high weight among the drachms of Ariarathes may be due either to a typographical error or, more likely, to the fact that this particular example may in reality be an

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ancient imitation of Ariarathes' imitations! For, curiously enough, such imitations actually weigh distinctly higher than do his own true issues, as a glance at the *Recueil*, p. 200\*\*, nos. 37, 38, 40, clearly shows. If we should eliminate this very exceptional weight the average for his own issues then gives us only grammes 5.144 per coin. The following table of frequency would seem to suggest an *intended* weight for his drachms somewhere between the extremes of grammes 4.90 and, perhaps, grammes 5.30 per coin.

FREQUENCY TABLE FOR DRACHMS OF ARIARATHES  
WITH SINOPEAN TYPES

Weights	Numbers
Above 5.50 grammes.....	1
5.49 to 5.40   “.....	2
5.39 to 5.30   “.....	2
5.29 to 5.20   “.....	4
5.19 to 5.10   “.....	6
5.09 to 5.00   “.....	3
4.99 to 4.90   “.....	4
4.89 to 4.80   “.....	0
4.79 to 4.70   “.....	1
4.69 to 4.60   “.....	1
4.59 to 4.50   “.....	0
4.49 to 4.40   “.....	1
4.39 to 4.30   “.....	1
	—
	26

Of practically identical weight are Ariarathes' Baal Gazur half staters. The seventeen weights recorded in the *Recueil*, plus those of the two

specimens in the writer's collection, give a grand total of grammes 97.63 for the nineteen examples, or an average of grammes 5.138 per coin. If then we take the average of 5.144 for Ariarathes' Sinopean imitations and the 5.138 for his Baal Gazur half staters and, further, compare these with the 5.821 for the standard drachm of Sinope and the 5.502 for the standard siglos of Amisus—we discover a very good and sufficient reason why the original owner of the Küchük Köhne hoard should have retained for daily use such Cappadocian coins as he happened to possess, the while he buried for future purposes his coins of fuller weight and wider currency. If we should further assume that the hoard may have actually been deposited in 322 B.C., during or just after the disastrous defeat of Ariarathes, we can practically envisage the thoughts of its owner. To him it would be much to be feared that henceforth the light weight Cappadocian coins might no longer be of any other than bullion value and that therefore he might better keep them to hand either to melt down or otherwise get rid of at the earliest possible moment. More acceptable coins, such as the Sinope, Amisus and Tarsus issues which would surely still retain their circulating value, he could cheerfully consign to the comparative safety of Mother Earth. In other words, we see before us a typical example of the working out of Gresham's well known law. Thus the absence from the



## 24 THE KÜCHÜK KÖHNE HOARD

Küchük Köhne hoard of any specimens of Ariarathes' coinages is neither very strange under the circumstances, nor does it in any way invalidate our supposition that the hoard itself was buried at some period in the decade after 333 B.C.

A burial somewhere between the years 325 and 320 B.C. has been indicated on page 11. Not content with this, the further suggestion was hazarded that the burial actually took place in and around the year 322 B.C. in direct consequence of the troublous times accompanying the downfall and death of Ariarathes I in the spring or early summer of that year. This estimate is determined, on the one hand, by their state of preservation and by the presence in the hoard of the Athena staters of Tarsus which stylistic and technical criteria show cannot have been struck before 327 B.C., and probably first appeared *circa* 325 B.C. On the other hand, the total absence of any coins of Alexander the Great clearly indicates that the hoard could hardly have been put away long after the conquest of Cappadocia by Perdiccas and Eumenes. The immediate consequence of the acquisition of Cappadocia would surely be the introduction therein of coins<sup>45</sup> of Alexandrine types to pay such Macedonian troops as Eumenes retained and to link the new province commercially with the remainder of the empire. After 320 B.C. Alexandrine coins must have become familiar sights along the highroads of

commerce and military administration which crossed the province from north to south and from east to west. In 320–19 B.C. the invasion of Cappadocia by Antigonus with a powerful army, his marches and countermarches during his struggle with Eumenes which culminated in the famous siege of Nora, must all have helped to disseminate coins of Alexandrine types far and wide throughout the province. The total absence of any such coins would therefore appear significant and would tend to confine the burial of the hoard to the years before *circa* 320 B.C. So far as our scanty historical sources allow any conclusion, the years following Ariarathes' acquisition of Tauric Cappadocia and its amalgamation by him with his dominions in Pontic Cappadocia appear to have been entirely peaceful until the day of the Macedonian irruption in 322 B.C. There therefore would seem to be nothing unlikely about our further belief that the Küchük Köhne hoard was buried during, or as an immediate consequence of, the devastating invasion of the country by the Macedonian forces in that year.

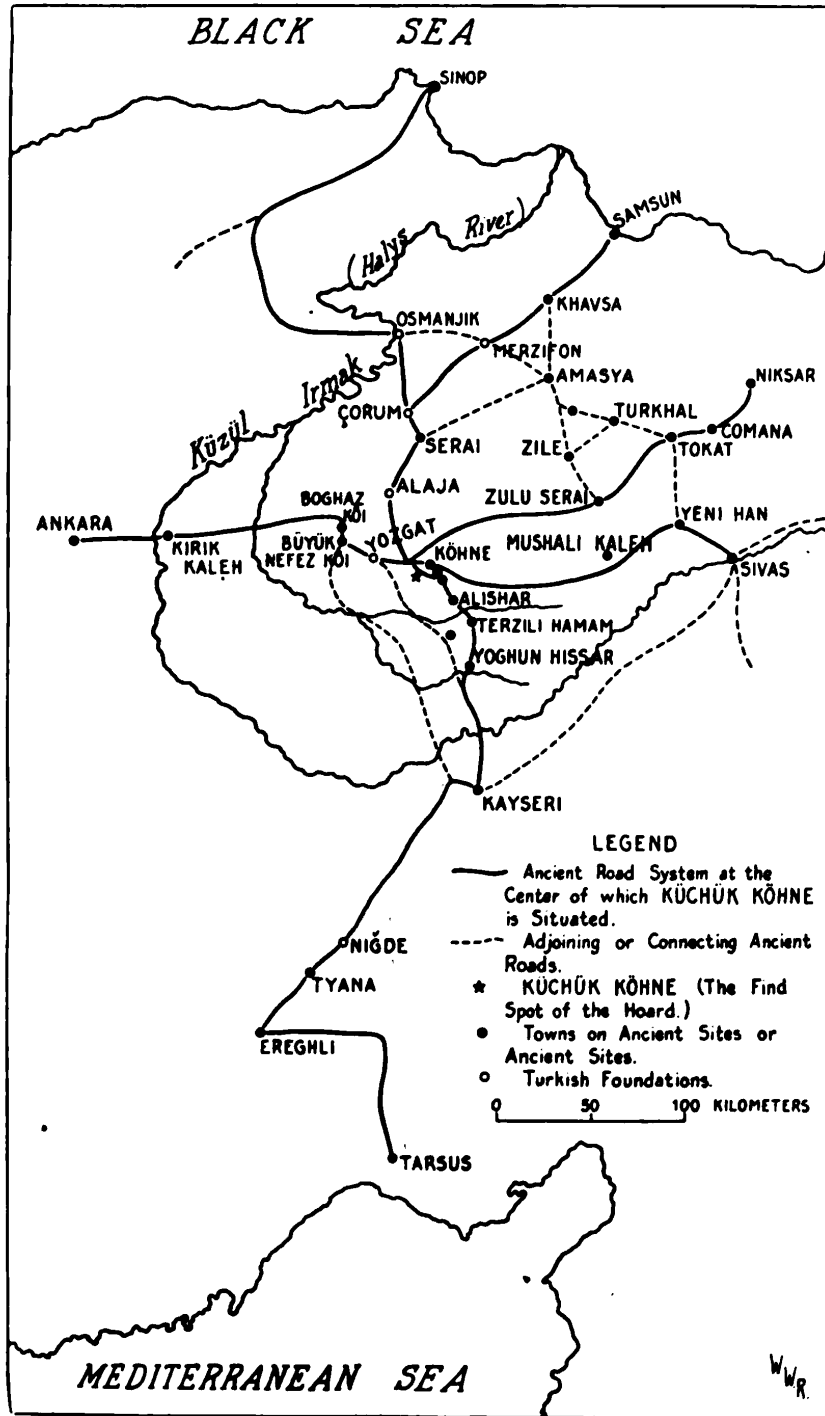
The all too brief account of Diodorus, partially supplemented by those of Plutarch and Nepos, does not permit us to follow the strategical details of the actual invasion or to determine the sites of the two battles—in the last one of which over four thousand Cappadocians are said to have perished

## 26 THE KÜCHÜK KÖHNE HOARD

and Ariarathes, together with his family, fell into the hands of the victors. Emil Reich on map XIV of his *Atlas Antiquus* indicates, in a general way, his conception of the route from Babylon necessarily followed by Perdiccas' army along the Euphrates, across that river at Zeugma-Apamea, thence following the old highroad that led past Doliche and Antiochia ad Taurum (the later Germanicia) and so into Cappadocia to the important town of Comana. Thereafter the army's marches together with the moves of their Cappadocian opponents are indicated, to be sure, but they must remain, for the present at least, purely suppositional.

From a geographical standpoint the find spot of our hoard does not lack a certain amount of interest. As stated above, the hamlet of Küçük Köhne lies in the immediate vicinity of Köhne. Now Köhne is today—as its predecessor was in antiquity—situated near the crossroads of two very important roads which date back certainly to the Hellenistic period and probably to far earlier times. From Tavium (now Büyük Nefez Köi) a highroad ran (cf. map), and still runs, easterly through Corniaspa (modern Yozgat<sup>46</sup>) to our Köhne (according to W. Ramsay, followed later by Kiepert, this represents the ancient Aegonne and Eugoni) where it branched into two roads, also of first class importance, the one running thence north-easterly directly to Zela (modern Zile) and

# THE KÜCHÜK KÖHNE HOARD 27



## 28 THE KÜCHÜK KÖHNE HOARD

Gaziura (modern Turkhal); the other and more southerly road running from Köhne via the later Sebastopolis (modern Zulu Serai) to Comana Pontica. The important south-north highroad, close to which Küçük Köhne is situated, crossed the west-east road at Köhne. Of this south-north road, according to Dr. von der Osten's personal assurance to the present writer, there still exist everywhere important traces and actual remains. Commencing at Tarsus this highroad ran through the famous "Cilician Gates" to Tyana and thence to Mazaca (the later Caesarea and the modern Kayseri). Continuing thence in a northerly direction it crossed an important branch of the Konak Su at Boghazlajan, then the Konak Su itself either by a ford situated between the modern Kadilli<sup>47</sup> and the former Armenian town of Chat<sup>48</sup> or at Terzili Hamam (the ancient Basilica Therma) and, finally, over still another branch, the Eyghri Özü,<sup>49</sup> at Yazili Tash<sup>50</sup> and thence northwards to Köhne. From Köhne it continued in a generally northerly direction to the modern Çorum where it divided, the western branch running north by west to Sinope (modern Sinop) on the Black Sea, the eastern branch running north by east to Amisus (modern Samsun) also on the Black Sea.

It is most interesting, therefore, to note that our hoard was found in close proximity to a location of great strategic and commercial importance,

## THE KÜCHÜK KÖHNE HOARD 29

namely the crossing point of the two most important routes in all this district. Furthermore, the hoard is notable for containing specimens of the coinages of each of the three ultimate termini of the great south-north road. Was its owner a merchant engaged in the carrying trade between these three important centres of commerce, or is it only a pure coincidence that his savings should have comprised issues of these three, and only of these three, mints? Was our hoarder, perhaps, the owner of a much-frequented *han* where were accustomed to sojourn the traders, merchants and caravans passing along these busy routes with their goods? Who can tell?

In any event, the Küçük Köhne hoard proves to be a most interesting relic from the early beginnings of an independent Cappadocian kingdom. Above all it offers us an indication of just what kinds of money constituted the most acceptable media of exchange in central Anatolia just preceding its invasion by the ubiquitous coinages of the Alexander type.

## 30 THE KÜCHÜK KÖHNE HOARD

### NOTES

1. H. H. von der Osten, *Explorations in Hittite Asia Minor*, 1927–28, p. 37 and, *ibid.* figs. 31 and 32. Cf. also the same writer's *The Alishar Hüyük, Season of 1927, Part I*, pp. 36 and 39. On Kiepert's map Küçük Köhne is equated with the ancient Verinopolis.
2. To Dr. von der Osten the writer here desires to express his appreciation for the permission to publish this important little hoard, as well as for his kind assistance with regard to certain geographical information and details contained in the following pages.
3. Throughout this article the modern and official Turkish form of spelling for the vilayet capitals is used.
4. Throughout the present work this will refer to *Recueil général des Monnaies Grecques d'Asie Mineure*, Tome premier, 2e Édition, Paris, 1925.
5. The writer's Myriandros—Alexandria kat' Isson in *The American Journal of Numismatics*, Vol. LIII, Part II.
6. Tarsos Under Alexander, *American Journal of Numismatics*, Vol. LII.
7. This number does not include one specimen described as *fouillée* and another as *percée* which latter may or may not be considered to have been actually *tested*. It should be noted that the compilers of the *Recueil*, by an oversight, did not describe the coin illustrated on Plate E, 27 as *cisaillée*, while on the other hand they so described a specimen in the author's collection, although the piece in question is absolutely untouched.
8. *Loc. cit.*, p. 193\*.
9. *Loc. cit.*, pp. 193\*, 200\*, 193\*\* ff. and, especially p. 193\* footnote 3.
10. *Recueil*, etc., 1st Ed., p. 179. This date was also adopted by the second edition of Head's *Historia Numorum*, p. 508.

## THE KÜCHÜK KÖHNE HOARD 31

11. Numismatic Chronicle, 1885, Ser. III, Vol. V, pp. 32–38.
12. See below, p. 24.
13. *Loc. cit.*, p. 193\*, note 3.
14. British Museum Catalogue, Lycaonia, Isauria and Cilicia, Pl. XXX, nos. 1–8; Babelon, *Traité*<sup>2</sup>, Pl. CXI, nos. 14–20, Pl. CXII, nos. 1–2.
15. Myriandros—Alexandria kat' Isson, American Journal of Numismatics, Vol. LIII, Part II, pp. 1–15.
16. *Ibid.*, p. 15. See also Tarsos under Alexander, American Journal of Numismatics, Vol. LII, pp. 72 and 83.
17. Tarsos etc., in The American Journal of Numismatics, Vol. LII, 1919, pp. 110–15.
18. Cf. Babelon, *Les Perses Achéménides*, Paris, 1893, p. xlv.
19. The earliest definitely *dated* issues of Alexander displaying this new scheme (Müller's Class IV) are those struck at Sidon in the year 325–4 B.C. (cf. Newell, The Dated Alexander Coinage of Sidon and Ake, New Haven, 1916, p. 13, no. 26) and at Ake in the year 321 B.C. (*ibid.*, p. 45, no. 24). See also G. F. Hill, Historical Greek Coins, p. 106; L. Müller, *Numismatique d'Alexandre le Grand*, pp. 6–7; H. v. Fritze, *Nomisma IX*, 1914, p. 49.
20. Tarsos, etc., pp. 72 ff.
21. *Ibid.*, p. 84.
22. Niese, *Geschichte der Griechischen und Makedonischen Staaten*, pp. 196–7; Ernst Meyer, *Die Grenzen der hellenistischen Staaten in Kleinasien*, pp. 7–8.
23. Numismatic Notes and Monographs No. 19, Alexander Hoards II, Demanhur, pp. 81–105.
24. The Angora Hoard (cf. S. P. Noe, A Bibliography of Greek Coin Hoards, Num. Notes and Mon. No. 25, p. 24) contained several examples of such imitations and an imitated drachm of Alexander was purchased during the excavations at Alishar. It is important



## 32 THE KÜCHÜK KÖHNE HOARD

- to note that this drachm was not based on the Attic weight system but on the Persian, thus showing that the Alexander coinage had not yet secured complete dominance in this district as against the preceding Persic coins of Tarsus and Sinope.
25. For instance, a hoard unearthed about 1850 near Caesarea contained, among other things, numerous staters of Tarsus (Datames and Mazaeus). Cf. Six, *Num. Chron.* 3rd Ser. Vol. IV. p. 119.
  26. *Recueil*, pp. 112-3; British Museum Catalogue, Galatia, etc., p. 29, nos. 1-4.
  27. K. Miller, *Itineraria Romana*, pp. 678-9.
  28. So Niese, *loc. cit.*, Vol. I, p. 196 and in Pauly-Wissowa, II, pp. 815-6, following Clinton, *Fasti Hellen.*, III, 431 and Six, *Num. Chron.* 3rd Ser. Vol. IV, 1884, p. 120. The Cambridge Ancient History, Vol. VI, pp. 366 and 369. Berve, *Das Alexanderreich*, Vol. II, pp. 59-60.
  29. *Trois Royaumes d'Asie Mineure*, pp. 13 and 27; *Mithradates Eupator*, Leipzig 1895, pp. 23-4.
  30. *Mélanges de Numismatique et de Philologie*, 1861, p. 84.
  31. The Sinope type is assigned to 330 B.C. in his *Trois Royaumes d'Asie Mineure*, p. 28.
  32. *Recueil*, p. 112.
  33. Pp. 508 and 749.
  34. British Museum Catalogue, Galatia, etc., pp. xxiv and 29.
  35. British Museum Catalogue, Pontus, etc., p. 96.
  36. *Traité*, II<sup>2</sup>, p. 434.
  37. *Ibid.*, p. 434.
  38. *Num. Chron.* 4th Ser., Vol. XX, 1920, p. 12.
  39. *Recueil*, Pl. XXIV, nos. 23 5.
  40. *Zeitschrift für Numismatik*, Vol. II, 1875, pp. 316-7.
  41. Among others cf. Reinach, *Trois Royaumes d'Asie Mineure*, pp. 26 and 28; Babelon, *Traité*, II<sup>2</sup>, pp. 430 and 437.

42. *Ibid.*, pp. 200\*, 193\*\*, 194\*\*, nos. 22 and 23. The weights of one piece which is definitely described as *fourrée*, as well as of three 'sports' weighing only grammes 4.38, 4.80 and 4.83 respectively (the results, probably, of damage, corrosion, over-cleaning or possibly some misprint in the text), have not been included. Also there have not been taken into account the weights of the "barbaric" imitations described *ibid.*, pp. 194\*\*–195\*\*, no. 24.
43. Pp. 54–8, nos. 1–5. The following weights, however, have not been included: gr. 3.23 (*cassée*), gr. 4.93 (*fourrée*), gr. 4.71 (*barbare*), the two very suspicious weights gr. 4.12 and gr. 4.13, as well as two specimens which, because of the unusual character of their inscriptions, are probably barbaric and weigh respectively gr. 4.38 and 4.50.
44. Pp. 198\*\*–200\*\*, nos. 34–36a inclusive, but omitting the barbaric imitations described under nos. 37–40.
45. Such coins would naturally have been drawn from the prolific Cilician and southern Asia Minor mints. The presence of a local mint for Alexandrine coins in Cappadocia is as yet unproved.
46. R. Kiepert, *Karte von Kleinasien*, B IV, Jozgad. K. Miller, *Itineraria Romana*, pp. 671–4.
47. Many classical remains, including inscriptions, are still to be seen in and around this village.
48. An ancient Hüyük is at this site, see figs. 7 and 8, pp. 16 and 17, also fig. 10, p. 19, *Explorations in Hittite Asia Minor*, 1927–28, by Dr. H. H. von der Osten.
49. Misnamed Tshakyrly Öz on Kiepert's map.
50. Where remains of an ancient bridge are still to be seen.



PLATE I



THE KÜCHÜK KÖHNE HOARD





PLATE I



THE KÜCHÜK KÖHNE HOARD





PLATE II

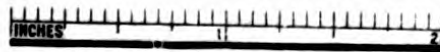










PLATE I

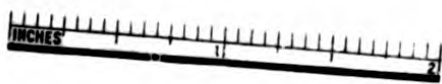


THE KÜCHÜK KÖHNE HOARD





PLATE II









# KÜCHÜK KÖHNE HOARD



# PLATE III



9



10



11



13



12



14



15



16







# KÜCHÜK KÖHNE HOARD



# PLATE III









# KÜCHÜK KÖHNE HOARD



PLATE IV



- 24 -



25



26



26



- 27 -



- 28 -









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35  
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# NUMISMATIC NOTES AND MONOGRAPHS

No. 47



## THE COINAGE OF METAPONTUM

(PART TWO)

BY  
SYDNEY P. NOE

THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
NEW YORK  
1931

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# NUMISMATIC NOTES AND MONOGRAPHS



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## METAPONTUM



311



311½

Achelous Dies



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# THE COINAGE OF METAPONTUM

BY SYDNEY P. NOE

## INTRODUCTION.

When the first portion of this study of the coins of Metopontum was finished, there seemed reason to hope to embody the remainder of the silver coins in a second monograph; but as new dies came to my attention and the combinations of dies continued to increase, it became apparent that it would be necessary to divide what remained into at least two parts. The question which then arose was where that division should come.

It has generally been accepted that the silver coinage of Metapontum, except for the reduced weight issues on what has been conveniently called the Hannibalic standard, ceased with the undoing of the city at the hands of Cleonimos, and the subsequent capture by the Lucanians, shortly before 300 B.C.\*

Previous to this date we have the gold issues and the tetradrachms with the Leukippos head, usually associated, and I believe properly so, with the ascendancy

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\* Numismatic Chronicle, 1909, p. 253.



of Alexander of Molossos. Before his coming there is no outstanding event which connects itself unmistakably with the coinage, and the problem therefore, became one of finding some point in the sequence of dies which would not disrupt the progression. That point seems to have been reached in connection with No. 506, which is to be aligned with the similar type of Terina, whose likeness to the decadrachm type employed by Euainetos at Syracuse, has been pointed out by Sir Arthur Evens.\*

The only approximation to a dating for this "echo" of the Euainetos type, is dependent on the dating assigned to the same type at Terina, but so little unanimity is to be expected on this question that I prefer to date the coins coming at the end of this second portion of my study as circa 360, trusting that the reasons behind this will become obvious in Part III.

It should be made plain that there is and that there can be no claim to finality in the arrangement here submitted. Hoards, as they are published, frequently record new varieties—sometimes entirely new types. Therefore it is to be expected that new die combinations will appear, and that through these, the reasoning behind some of my arrangements will be rectified or proved of little worth. Few of the hoards found in south Italy have been recorded intact when discovered, and in consequence the coinage of Meta-

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\* Numismatic Chronicle, 1912, p. 46 ff.

pontum, along with that of its neighbors, offers rich fruitage to study. In the meantime, it is hoped that this classification will make possible the identification of these pieces when they are found hereafter, and that it will do away with some of the ambiguous descriptions which make the previous records of such hoards of but little value.

A list of those to whom I have been under obligation for casts or for information regarding these coins, would include the officials of most of the National Cabinets and many private collectors of both Europe and America. To some I am under especial obligation and I am glad to express grateful thanks to Professor Dr. Kurt Regling of the Berlin Cabinet, who supplied me with the weights of the specimens in his care, in spite of the considerable personal inconvenience which this involved. I would also thank Mr. A. H. Lloyd, the Honorary Curator of the collection at Cambridge, for a list of his coins and their weights as well as for the casts of those requested by me.

For convenience of reference I wish to restate the convention used in the interests of space-economy in describing the placing of the ethnic on coins. The barley ear is indicated by a colon (:), the inscription is indicated as being on the left or the right of the ear, according as it is on the left or right of the colon; when the top of the inscription is next the ear or its awns, the inscription is overlined and the topmost letter is indicated by a period (.) over that letter;

when the bases of the letters are next the awns the inscription is underlined and again the topmost letter is indicated by a dot over that letter. For example, :METĀ indicates that the inscription in this case is to the right of the barley ear with the top of the letters nearest the outer awn and with the final letter at the top. In other words, it reads diagonally upwards to the right. A reference to the plates should always clarify any ambiguity. In the text the plate references are given in Roman numerals.

It should also be pointed out that duplication may have occurred in listing the respective coins under their several varieties, although every effort has been made to avoid this. When, however, neither the coins nor casts have been seen by me, it is not possible to identify whether or not these pieces have occurred in sales, and if the weights are not obtainable, this further check on duplication is absent. What results is that the specimens listed as g. and j. of a given variety may prove to be identical.

#### THE FIRST DOUBLE-RELIEF COINAGE.

It would not be so simple a matter to select the earliest of Metapontum's double-relief coinage-types, if we did not have a convenient muling of dies. Plate I shows a fairly homogeneous group save for the first coin with its star-like disposition of the barley grains. With this, as with the standing Achelous type, which follows it an obverse die from the incuse series is used. This star-like type does not recur

except in the bronze issues, where it is threefold. A somewhat similar type is found among the coins of Melos in the 1907 hoard, but there also a decorative grouping of units is the likely explanation—it is difficult to see any significance in the analogy.

The literature concerning the Achelous type is considerable—in itself a witness to the importance of this type and inscription. Early in my study I came to the conclusion that previous discussions left little new regarding this type to be presented. Recently however, conditions have changed, as will be seen. On No. 311 Achelous is represented in full face—a very early occurrence especially noteworthy because of the small scale of the head. There is a die-break affecting the lower part of the face so that it is difficult to decide whether there is a flowing beard or whether what appears to be a flowing beard is a result of the die-break. The head shows the horns and ears of a bull, but the remainder of the face appears to be human—a conclusion which is unescapable if the “beard” is admitted as intentional. Tiny fillets hang from the ears or horns.

But these are not the only details which differentiate this presentation of the river-god from others. The standing figure is nude save for drapery (called a chlamys in most descriptions) knotted to both (?) arms at the elbow, and to be seen hanging in a curve behind the back. Both ends hang free—much as on the staters of Poseidonia. In his left hand is a long reed with several leaves showing—in his right, a

phiale is held as though pouring a libation. The analogy with the type for Selinus is patent, and the accepted explanation that this implies a petition for remedying the unhealthful conditions due to the city's location would be appropriate for Metapontum. Not least in importance is the evidence that games in honor of the river-god were held at Metapontum.

Head's description is correct save in that it repeats an old error traceable to an engraving in Millingen's "Ancient Coins of Greek Cities" (Plate I, 21), and this mistake is repeated by others. A die-break which extends from the ear of Achelous to the outstretched arm, and from beneath the patera to the rim, partly obscuring the E is engraved as a dolphin in the portion affecting the E. None of the four coins known show this dolphin, and Head's "dolphin sometimes in the field" is a mistaken reliance on the statement of others.

The inscription is reproduced accurately in the *Historia Numorum* and affords valuable evidence for the epigraphist, since the coin must have been struck between 490 and 470 B.C. The coin is not as old as the diamond-shaped *omicrons* and *theta*, the three-stroke *iota* or the arrow-formed *chi* at first seem to indicate. The E is not of the archaic form found on the incuse coins, nor is the N as early as that on No. 135 (Part I).

Early in 1930, I received the cast of a stater of this type, acquired a little previously by the Naples Cabinet, and courteously sent me through the

kindness of Mr. Albert Gallatin. This Achelous die is one entirely unknown heretofore. So striking are the differences, that enlargements are presented (cf. frontispiece). There is no good reason for thinking we have to do with a counterfeit, for the obverse die is identical for both varieties. In addition, the piece was obtained from a peasant along with other coins of little importance, for a nominal sum. It has been examined by a number of competent judges who agree that it is not to be suspected.

The head of the figure has short, thick horns, and ears larger than on the earlier variety. The drapery is more a matter of line than of modelling in relief. The figure is taller and very slender. But the greatest differences are in the inscription. This has taken the form which would result through having been copied on the die in the relative position in which it was found in the coin-pattern. Instead of being at the right, the name of the river-god is on the left of the figure, beginning beneath the patera rather than above it. AEΘΛON, instead of beginning at the top and reading downward (retrograde), begins at a point level with the knee of the figure and proceeds upward (also retrograde). Both omicrons of the first word are almost off-flan, but enough remains to show them circular in form. Both theta and omicron of AEΘΛON show rounded forms. There can hardly have been a considerable interval between the two dies, for the obverse, common to both, served also for one of the incuse forms (No. 261, Part I). It would

be logical to conclude that the Heracles type, one of which shows that hero pouring a libation (No. 312) may also have been connected with games.

The fractional issues (diobols ?), on Plate XXVII, Nos. 347–350, show the more usual bull's head with a human face. There are at least four dies and some variation in style so that they may have extended over an interval of several years. On the other hand, except in subject, and then only with differences not easily to be reconciled, are they to be connected with the stater-type.

The two Heracles types Nos. 312, 313 share the same ethnic die with the first of the standing Apollo types—that they precede the Apollo type is indicated by the wearing of the die. In the first, Heracles bears lion-skin, bow and club. An object above his right hand has not been convincingly identified. We find the head of Heracles occurring later on the staters; in all three instances the type changes after a single die has been used.

The bow and the branch of Nos. 314–320, not to mention the treatment of the hair, make the identification of the figure as that of Apollo unmistakable. With the exception of No. 319, the variations are confined to the leaves on the branch. The altar is an obvious reminiscence of No. 312. So far as our present knowledge goes, No. 320 is the only occurrence at Metapontum of the hemi-stater—of division into halves instead of into thirds. The possible significance of this will be seen later.

## PLATE XXV.

A glance at Plate XXV will show that there is very little connection in point of style between these coins and those on the preceding plate. The change from the earlier series is striking—the use of the head for the type is a radical innovation for this mint. The quality of the workmanship is poorer—a condition which is even more apparent in the modelling of the barley-ear. Instead of a fine, decorative ear, there is a sickly, scrawny one, which makes it seem as though the tradition had been lost and a new beginning made. There is another radical difference; the badge of the city, the barley-ear, is no longer the anvil or obverse die as it had been since the institution of the double-relief coinage—it has now become the reverse or punch die. All these elements give support to the probability that there was an interval after the coins with the standing figures, an interval in which no coins were struck. And there is historical evidence which lends itself to this interpretation.

Previously in this work, historical or archeological questions which could not be shown to have a bearing on the coinage of the city have been avoided as irrelevant. So little is known of the history of Magna Graecia, and that little is so clouded with uncertainty that it has seemed wisest to allow the numismatic material to stand alone. The excavations conducted at Metapontum by De Luynes did not supply much material of the kind sought by the successful exca-



vator of that day, and the poverty of the city in its later days makes digging there now less promising than at some other sites. As the climate is malarial, we shall in all probability have to wait many years before our scanty knowledge of Metapontum is increased by the spade of the archæologist and this in spite of the temple there, of which fifteen columns are still standing, of a second temple but little more than a mass of blocks, and of the known location of the theatre, which is practically untouched.<sup>1</sup>

There is, however, a historical occurrence which may explain the gap in the coinage which we have just been noticing. Herodotus tells us (Herodot., VII, 170) of a war between the Iapygians (Messapians) and the allied Tarentines and Rhegians which resulted in a disastrous defeat of the latter—a defeat which he characterizes as “the greatest which in his memory ever befell the Greek people.” Diodorus<sup>2</sup> places the beginning of this war in the fourth year of the seventy-sixth olympiad (473 B.C.). Aristotle,<sup>3</sup> speaks of the great number of the Tarentine nobility killed and of the change in the form of the Tarentine constitution which was the aftermath. Pœis, in an effort to explain a difficulty<sup>4</sup> in the account of Diodorus<sup>5</sup> states as his opinion that Metapontum was at this time under the hegemony of Tarentum.<sup>6</sup>

If it were true that Metapontum was even temporarily under the domination of Tarentum at the time of this defeat, she would have shared in the conditions following upon it, even if her soldiers did

not participate in the struggle. This, however, might with equal probability have resulted were she passive, since the economic consequences could hardly have failed to extend over a wide area. There is, on the other hand, one bit of evidence in support of his position which Pais does not mention. The staters of Doric Tarentum were divided into halves, while the Achaean cities divided their staters into thirds. No. 320 is the only instance at Metapontum where the division is into halves, and coming as this does at the end of this series, it might indicate a short-lived predominance of Tarentine influence at Metapontum. The group of staters with the standing figures is not without some analogy to that of the seated oekist at Tarentum.

What remains is that there seems to have been a sensible interval during which Metapontum did not issue staters, and that this interval apparently coincides with the years following the defeat of the Tarentine-Rhegian forces at the hands of the Iapygians shortly after 473 B.C.

To justify the placing of the coins on Plate XXV in the order shown, it is necessary to work backward from Plate XXXIII. Here is to be found the wonderful design with the figure of Apollo seated—a die which at first glance we might expect to find associated with the group showing Apollo standing, on Plate XXIV. This die, however, is muled with a reverse that is shared by No. 430. It shows a barley ear that is broad, spread, and entirely too large for the

flan. The other obverse with which it is muled, bears the head of Heracles, who, singularly enough, appears also in the series on Plate XXIV. This Heracles head shows the pupil of the eye modelled, and a careful examination of the coins on Plates XXV to XVIII reveals that these coins do not. The indication of the iris thus becomes a very valuable criterion. By back-tracking from the Heracles head group, it will be found that the coins on Plate XXV fall into the order shown—the connecting steps will be taken up as we proceed.

The plant on the reverse of 321 is identified as a poppy<sup>7</sup> and may therefore be taken as a reference to Demeter, with whom the poppy is associated. If the object on the reverse is a torch, it may be an allusion to Demeter's search for Persephone, and this would also explain the veil she is wearing on Nos. 322 and 323, where the identification as Demeter seems incontrovertible. The figure of the "hastening Demeter" recurs on one of the staters at the other extreme of the city's coinage. If the advanced style of these two dies seems disturbing when compared with those which follow, it might be pointed out that both reverses lack the leaf which regularly accompanies the civic badge on the succeeding dies. The incuse pieces are also without the leaf.

The Berlin specimen of No. 321 is struck over a stater of Croton, apparently one of the late varieties of the thick incuse types; the rings and knob of the tripod basin may be distinguished at the lower right

of the obverse. This circumstance is in favor of its being placed here rather than at the beginning of the double-relief coinage, as Dr. Regling proposed in 1906.<sup>8</sup> The similarity of the treatment of the barley ear on these coins of Plate XXV affords ocular proof that they belong together. Such details as the forms of the letters and the arrangement of the inscriptions support the evidence of the similar modelling of the heads, the treatment of the profile and the placement of the heads on the flans.

The procedure on the reverses of Nos. 322–323 is interesting. On the reverse of the first, ΠONT has been recut over an earlier inscription, apparently, but not certainly, META retrograde. The length of the ethnic on these coins is unusual at this period. Is the carrying over of the Π on No. 324 and the filling of the field with a leaf an echo of the procedure on the two earlier dies? Note, please, that this form of leaf appears on the *obverse* of Nos. 331 and 332 along with *three other* “symbols”—a bipennis, a branch remotely resembling the silphium of Cyrene, and a B-like object which also occurs on the coinage of Croton and which is like the briquet or fire-steel of the middle ages.

In identification of the types, there is room for much speculation. On Nos. 322 and 323 we almost certainly have Demeter—witness the veil and torch. No. 324 is unique, but despite the similarity in workmanship and general appearance, there can be little positiveness as to type unless a more complete

specimen comes to light. The fillet and necklace of Nos. 331–332 identify the type as feminine, although the rugged profile might otherwise have pointed to the alternative. I have no interpretation or identification to offer either for the type or the symbols. The rusted state of the die of 331 (it is the same as that of 330), may indicate its having lain idle for an interval. The abundance of symbols, and their use in connection with the head, is to be found nowhere else in the city's coinage.

#### PLATE XXVI.

Although the coins with the Apollo Karneios type coins seem to follow upon those of Plate XXV, because this order depends upon the muling with a plated coin, it can, as yet, hardly be considered as established beyond question. No alternative has been found, however. The acceptance of the identification of the figure as Apollo Karneios is dictated by the reasoning presented by Imhoof-Blumer.<sup>9</sup> Head suggests the Libyan Dionysus or "possibly Apollo Karneios." A. B. Cook, in his Zeus,<sup>10</sup> feels sure that this is Zeus Ammon. The scholars of the Berlin Cabinet, because of the moist appearance of the hair, believe this a river-god. Since we have here (363–365) and among the later diobols a youthful as well as a bearded horned head, Imhoof-Blumer points out that we can hardly have at approximately the same time a youthful and a mature Zeus Ammon. He also submits that the river-god is usually shown

with the horns of a steer, and that Zeus Ammon is usually represented with a human ear rather than the one shown on this type. As there is every condition favoring the worship of Apollo Karneios at Metapontum, and since one of the inscriptions found on the site bears a dedication to Apollo,<sup>11</sup> to say nothing of other coin-types which unmistakably refer to him, there is ample support for the opinion of Imhoof-Blumer.

## PLATE XXVII.

These fractional issues have been grouped arbitrarily on Plate XXVII, partly for convenience, but chiefly because any definitive arrangement of them without further data from hoards must be conjectural. Deductions from style with pieces so small is hazardous, and there is left only analogy of type and weight, and again the smallness makes metrological exactness difficult.

No. 346, a unique piece in the Berlin Museum, may have had some connection with the incuse bull's-head type shown on Plate XXII of Part I. The weights of the incuse diobols range from about 0.98 to 1.32; this coin weighs 0.37. The unidentified symbol (an ant or lizard) might connect it with the late thick-flan staters (209-231).

Of Nos. 347-350, I have been able to find but ten specimens. The weights range from 0.66 to 0.80. If the identification of this type as Achelous is

accepted, it is reasonable to place the issue at the same time as the stater (No. 311) referring to the games. The two annulets on the reverse might be taken to indicate the circulation of these pieces as sixths or diobols; they also occur on the types with a barley-corn incuse, of approximately the same range of weights (Part I. Nos. 297–309). The symbol in the right field of the obverse of 350 is a tiny lizard (cf. Part I, Nos. 209–219), a recurrence of the symbol on several of the incuse thick-flan dies. Finally, the use of the barley-ear for the obverse type places the issue before the staters which appear on Plate XXV, after which the ear is relegated to the reverse.

Nos. 351–357, with the triple-crescent type, and apparently obols, weigh from 0.49 to 0.62, with a single specimen, 360, of what is apparently the double, which weighs 1.01 (worn). In the *Historia Numorum* this type is placed with the incuse issues occurring before 470 B.C., a course for which it is difficult to see the necessity because there are incuse fractions which fit there better than these do. The form of the barley-ear varies greatly, ranging from very low relief to quite the opposite. With the exception of No. 361, no symbols have been found, and unfortunately this one is indefinite. The three crescents on the reverse have become conventional, or rather mechanical with 357, affording a further indication of the type's having persisted over a considerable period. The use of the ear as the obverse type, however, prevents assigning this series to a period later than that of the coins on

Plate XXV. It is possible that they bridged the transition from the incuse to the double-relief form.

Nos. 361 and 362 are each known in single specimens—the weight of the latter is 0.40. The ivy (?) leaf symbol is the only connection with the stater series, unless we associate these pieces with No. 321, where both obverse and reverse are also occupied by the barley-ear—compare No. 324 where the leaf symbol occurs in a similar position but on other side of type, and 331–332 where there is such a leaf on the obverse along with other symbols.

Nos. 363–365 would logically be associated with the staters shown on Plate XXVI. The weights range from 1.02 to 1.35, which makes this a diobol. This issue is not to be confused with a much later one with a plough, or an owl devouring a grasshopper, as symbols.

### PLATED COINS.

One cannot go far in the study of the coins of Metapontum without having to face the question of plated pieces. They occur in the thick-flan incuse pieces, and occasionally, but much more rarely, among the earlier incuse of spread flans. A re-examination of the evidence regarding these *fourréc* pieces must some day be attempted, but this evidence is very widely scattered, and generalizations usually leave the impression that all of the elements which must enter into the problem have not been considered. My



effort in recording what the Metapontine series has to show, is to be exceedingly scrupulous in statement.

In his valuable classification of the Tarentine Oekist-type, M. Vlasto distinguishes between plated pieces which he calls barbaric imitations, and others which seem to be in the nature of trial-pieces struck in the mint, and occasionally sharing dies muled with unquestionably authentic issues.<sup>12</sup> M. Vlasto's position that some plated pieces are official and some are not, is supported by the evidence of the Metapontine series. It would be safest to regard as "official" only those which are found muled with other dies in coins of full weight, which are unquestionably genuine.

In a supplementary plate, certain of these plated coins are shown. Often they are of such poor style and workmanship that it is not easy to determine which types are being copied. Unfortunately, our problem is complicated by the so-called "barbaric imitations," (cf. Nos. 343 and 344), and Plate XXVI of this monograph illustrates these complications. The obverse of No. 333 is a fairly close copying of that of Nos. 325-331, and only by close comparison will it be seen that it is weaker workmanship. The next coin on the plate, No. 334, has an obverse with modelling that differs from Nos. 335-7 and 339-341 which follow it, but the same reverse as No. 333. The weights of the four known specimens of 334 are low, and more than one of them is to be suspected of being plated. But this reverse, as well as that of the plated piece which precedes it, is almost identical with

that of No. 335, which is next on the plate, and of which there are four specimens of full weight. Furthermore, No. 338, of which there are three specimens known, is under-weight in all three cases, and is catalogued as plated in at least one of them—the reverse occurs, however, in No. 340—a coin weighing 7.39 in Mr. Lloyd's collection. For comparison with the workmanship of the "barbaric" style, we need go no further than Nos. 343 and 344 on the same plate. No. 342 with the badly worn obverse die and the reverse die broken across the ear diagonally downward to the right, I have been unable to trace in any other specimens. For further data regarding plated staters, see page 51.

## PLATE XXVIII.

Can anyone question that we have Demeter's daughter in the type on Plates XXVIII and XXIX? Elsewhere we are sometimes at a loss in knowing whether Demeter or Persephone is intended—a possibly deliberate condition with the Greek whose symbolism did not sharply distinguish between the mother grain-stalk (Demeter) and the seed, which, like the daughter, must spend certain months of the year underground, and whose reappearance in the tiny grain-shoots of the spring was as joyously greeted as the return of the daughter. This might be called the Kore type, because of the obviousness of the intention to depict the just-achieved maturity of a

maiden, which makes this head among the most beautiful in Greek art.

The dies of the coins on Plates XXVIII and XXIX, are among the most difficult of the Metapontine issues to differentiate. Significant details are frequently obliterated through wear or injudicious cleaning, or because of the placement on the flan. To support their position following the horned male head of Plate XXVI, we have first of all the condition that almost without exception these staters show the eyeball without the iris—the change comes in a following series. Further than this, none of the reverses show the bird or insect symbols which appear in the groups which follow. Besides this, they agree in style with the reverses of the preceding plate, especially in the placing of the ethnic and the form of the letters; a comparison of the unquestionably “official” obverse dies (Nos. 335–7 and Nos. 339–40) on Plate XXVI, with the heads of these two plates, reveals technical similarities which are obscured by the difference in types.

#### PLATE XXIX.

Although the group is an extended one, the number of coins from each combination of dies is seldom great, the largest being eleven (No. 383). The barbaric imitations have been placed at the end (Nos. 388–9). It will simplify comparisons to note that Nos. 384–388 are without the fillet-loop behind

the head, and that Nos. 373-377 have the reverse inscriptions downward. The die-breaks are often of great help in establishing identities, but they fail, of course, if the piece is from an early state of the die. A very singular condition arises with No. 375, which, without the three specimens recorded might be viewed with suspicion. For this coin, two reverse dies were used. For a time the mint may have been without a single obverse die.

The absence of a necklace throughout the entire group is noteworthy, and among the technical details, the timid treatment of the often-obliterated earring is in contrast to the handling which it receives later with Aristoxenos and his successors. The flan is broader and the dies larger than with most others in the city's coinage in double relief.

### PLATE XXX.

The coins on Plates XXX and XXXI resolve themselves into four groups roughly corresponding to the rows on the Plates. The Hygieia type No. 411, is a development of the coins immediately preceding it (Nos. 406-9). No. 405 shares its reverse with No. 406, and the progressing die-break shows that No. 406 is later than No. 405. The treatment of the barley-ear in Nos. 400-2, groups them with No. 404, and the working of the eyeball precludes their coming later in the series as a comparison with No. 411 will demonstrate. The group on the first row of Plate XXX should precede those on the lower row, because of the

use of subsidiary symbols on the reverses in the second group.

From the ears of barley in the field and in the hair of the goddess, coupled with the maturity of the face, there can be little opposition to the identification of the type on Plate XXX as Demeter.

The placing of the barley-sprays in the field of Nos. 391–392 is not without an eye to the decorative effect, but it is not so happy in No. 393. Two plated specimens (No. 394) are shown as a demonstration of how far short these pieces fall in point of style. The imitation of the leaves below the neck on the obverse is meaningless, while on the reverse, the feeble modelling of the barley-ear and the poor lettering are hard to understand in view of the close approximation to the model on the obverse. In No. 398, one barley-ear projects above the forehead—a second one, which is usually partly obliterated by wear, is to be seen on sharply struck specimens lying in the hair along the line of the fillet.

The reverse symbol of Nos. 397–399 is a praying mantis (*mantis religiosa*). There is a mention of this insect by Anacreon (10, 3) as well as other writers. The primary meaning of the word is “prophet” or “one who divines,” and the appropriateness of the appellation is apparent to anyone who is familiar with the mantis. Any explanation of a significance with which this symbol may be supposed to have been attended must take into account not only the locust and the bird with upraised wings of the succeeding

numbers, but the crayfish (or lobster) on Plate XXXII as well. The mantis may have been mistakenly classed with the locust and the bird as a grain-destroyer and their use as symbols interpreted as propitiatory in intention, but we can hardly add the crayfish to this class. Inanimate symbols, along with others like these, occur on Plates XXXIII and XXXIV. No. 396 is known in a single specimen. No. 399, though of very poor style, is not dangerously below standard weight and does not seem to be plated.

#### PLATE XXXI.

Nos. 400–401 are obviously modelled on the earlier type—compare Plate XXIX. The treatment of the eyeball and the absence of reverse symbols place it here. I have not been able to fit in Nos. 402–403 satisfactorily anywhere. The hair bandeau reminds of the types on Plate XXIX, and the style of the barley-ear is that of the coins on Plate XXVI, but the use of the letter  $\Xi$ , behind the neck is a much later practice, although it also occurs exceptionally on Nos. 404–405.

The position of No. 405 is fixed by the muling of the reverse die with No. 406. The change of scale in No. 411 (No. 410 is left blank) is interesting because of the close following of the type in all other details. The inscription on the neck-base— $\vdots Y \Gamma I E I A$ —seems, therefore, in the nature of an epithet rather than an identification of the type as may be the intention with

later inscriptions in the same position, such as ΑΠΙΟΑ and ΝΙΚΑ (Nos. 460 and 488). The bud beneath the chin in the prototype and the absence of the barley-ears in both varieties, might be interpreted as indicating Persephone rather than Demeter. It would, on the contrary, be more reasonable to think of the type of No. 411 as that of the daughter, and the maturer type which precedes it as Demeter. A misreading of the Hygieia inscription led Raoul-Rochette to identify this as the signature of an artist "Augias"—a confusion not difficult to understand.

#### PLATE XXXII.

With the coins on Plate XXXII, there is but little to add to what will be noted in connection with the alteration of dies (page 27) or with the discussion of the sequence of the signatures of Aristoxenos (page 30). The persistence of the Hygieia type may have a significance that escapes us, as may also the use of the wreath encircling the type. This convention is to be found also at Terina, and, at Rhegium, at an earlier date. At Terina, however, there is an approximation of type as well as of its use in a wreath—a possible indication of a market for their produce shared by the two cities. No. 417 is of very crude workmanship when compared with the others of the group—the condition is true of the reverse also—have we here to do with another of the "barbaric imitations?" The manner of dividing the ethnic in

No. 415 is distinctive—it recurs in Nos. 427 and 435, but not elsewhere. The change of the inscription of No. 420 from HOMONOIA to DAMATER on 421 may be taken as an indication that the use on the former die is that of an epithet. If this be conceded, the same conclusion would follow for the HYGIEIA type. Lastly, the progression toward the exquisiteness of the Demeter type of No. 422 will bear mentioning.

#### DIE CONDITIONS FOR DOUBLE RELIEF STATERS.

In Part I of this study (pages 23–28) evidence showing the alterations in finished dies was submitted; to that I would now add further evidence that the practice did not stop with the incuse form. Most of these statements can be followed much easier with the coins involved, or with casts of them, but a number are apparent even where photographic reproduction has minimized the relief. It is, of course, not possible to show all stages in the breaking down of a die in more than a few instances, but deductions based on occurrences of a single specimen from a die have been avoided. In the more startling of these alterations I have not relied on my own observations solely, but I have submitted them for confirmation to the experiences of my colleagues, Messrs. Newell and Wood, to whom I make grateful acknowledgment. In addition to other instances quoted, the practice of adding to dies finds illustra-



tion at Terina in the piece discussed by Sir Arthur Evans (*Num. Chron.*, 1912, pp. 59 ff.). In this instance, a symbol was added to the reverse exergue, and a monogram to the obverse. The practice is not uncommon at Velia.

The dies for the double relief issues are in the beginning slightly convex, so that the coins are concave on the reverse. A number of the pieces illustrated show die outlines. With few exceptions these show the dies themselves to have been circular or nearly circular in shape. On one exception, the obverse die appears to be hexagonal; others are apparently oval rather than circular. The absence of this concavity may sometimes be noted on the dies which are to be suspected of being unofficial. Cf. No. 534.

By comparing Nos. 418 and 419, it will be seen that the encircling wreath about the head on the obverse is identical for both coins in its placing with relation to the features. The die broke over the ear, the flaw beginning in the hair above, and extended down and included the ear. Apparently an effort was made to repair this damage by deepening the die over the cheek and neck. Re-cutting the enclosing wreath may have been with the intent of preventing further widening of the seam by having the wreath serve as a rim to take up the stress due to the expansion of the metal in striking. This deepening left an opportunity on the level of the neck truncation for the addition of a signature of which at least five letters can be read certainly,—“APIΣT.”

This signature is not present in any of the staters in the earlier state of the die. It occupies the space previously used for the epithet— $\vdash Y \Gamma I E I A$ —occurring on a single die (Nos. 411–13 inclusive).

Imhoof-Blumer in the *Revue Suisse* for 1908, page 137, calls attention to one of the most interesting die alterations in this entire series. No. 420 shows a head to the left with the inscription  $\vdash O M O N O I A$ . There are traces of a die-break extending from the crown of the head in a curved line below the ear and including the earring. In No. 421, we have the same die and because of the die-break already described, unmistakably identical, but now having, instead of the inscription found on No. 421, a “torch” and the inscription  $\Delta A M$ —(ATEP). Above the line of the torch can be seen the faint traces of the top of the N as it appeared on the initial state of the die. Beside this change, the necklace which in the first state was a simple line across the throat with a pendant in front, has now been altered so that it is a necklace of beads. The form of this recut bead necklace is strikingly similar to that of No. 422, which is signed by Aristoxenos. Can it be that we have a second die altered by his hand? Another condition, however, which seems not to have been noticed by Imhoof-Blumer, is that the reverse die also exists in more than one state. It is an unusual die in that the divided inscription shows the A in an inverted position above the tip of the leaf to the left. Other divided inscriptions have occurred in the preceding group but none in quite this

form. In addition, however, there is a slight flaw just at the extremity of the leaf, and directly below the letter A, and this flaw in conjunction with the unusual position of the letter enables us to identify the die when it recurs in No. 446. The flaw at the extremity of the leaf now shows a considerable increase in size and there is a further break across the barley ear diagonally downward to the right. There has been added, however, between the wreath and parallel with the outermost awn of the ear, the letters ΛΥ retrograde—letters which occur on No. 447, and on the obverse of Nos. 477–9, as ΛΥΔΟ (retrograde).

Another interesting die-break is to be found in Nos. 487 and 488. On this reverse a diagonal break below the pear symbol is to be seen in the field to the right and it gradually develops to include a larger segment although there is apparently some effort to adjust the flan to the broken die so that the defect is minimized.

No. 465 shows a somewhat different break, also in the reverse die, which obscures the insect symbol in most of the specimens that have come down to us. Unfortunately, the piece showing the earliest condition of the break is too poorly preserved for illustration.

No. 450 shows a very beautiful head with the inscription ΝΙΚΑ to be seen on perfectly centered specimens. A specimen in Vienna shows no signs of the break which, in later specimens for this die, begins above the ear and extends out over the cheek and back

below the ear and across the neck like a large square "C." This defect seems not so much a breaking away of the die as a thin surface flaking or possibly a sinking-in of the die's surface due to insufficient hardening of the metal. Because the specimens available show the development of this flaw so satisfactorily, the various stages are illustrated in seven specimens. In the last state, No. 452, it will be seen that the die has been re-cut below the diadem so that the face is in high relief where before the relief was moderate. The whole aspect of the type has been modified so that there would be difficulty in recognizing it as the same head which began as No. 450a.

In No. 525 we have another unusual reverse break which seems to have affected only the symbol in the field to the right which is apparently a sea-shell in some measure resembling a murex. One specimen only is known in this state. On the reverse of No. 526 we find an almost undistinguishable symbol which on comparison proves to be the one we are discussing. It now has, however, on a small cartouche below it the inscription  $\vdash$ EP and of this state three specimens are known. This might be considered evidence for supposing that  $\vdash$ EP was a magistrate whose symbol was the murex and that his initials were added after the break had developed, and when the symbol could no longer be recognized. If this could be established, we should gain support for the identification of all the letters beneath symbols which occur on the later issues as being subject to the same interpretation.

Unfortunately we have later, different names accompanying the same symbol.

### ARISTOXENOS.

At Metapontum, the name of Aristoxenos occurs, in full or in part, on at least six obverse dies and on two reverses—the identification on one of these latter, No. 433, is possibly questionable. At Heracleia, his name occurs on both the obverse and reverse dies of the same stater—hidden at the base of the crest of the Attic helmet on the one side, and between the feet of Heracles struggling with the Nemean lion on the reverse. Whether we have his name in an abbreviated form at Tarentum, is a moot question which need not complicate our present discussion—I shall submit reasons for my position that this is not a necessary conclusion in a later study of the occurrence of the names API and APIΣTI at Metapontum.

Nowhere else in Metapontum's coinage, and rarely elsewhere in the coinage of Magna Graecia, do we have the artist's name given in full. If this is not to be accepted as an indication of the honor in which Aristoxenos was held, is it not significant of his indispensability? One who was subservient would hardly risk consequences by such an innovation.

The preceding study of altered or re-cut dies is necessary before examining the signed dies of Aristoxenos, because as has already been shown, in No.

419; we have a die that has been deepened. Moreover, if the re-cut die for No. 421 was not altered by Aristoxenos, we have at least evidence that someone repaired it, and we may conclude that the die could be repaired more rapidly than a new one could be cut. In other words, the mint may have been without a die cutter for a period, a significant fact, as will be seen later.

The study of the workmanship of Aristoxenos on his signed dies is now in order. On the first of these, No. 422, at the base of the neck, one reads ΑΡΙΣΤΟΞΕ. The reading is certain because a number of fleur-de-coin specimens occur in the Palombara Hoard<sup>13</sup> and are now in several private cabinets. The mature head represents Demeter, as will be seen by comparison with No. 421, which is so inscribed. There has been much discussion of the significance of single ivy leaf in the wreath of laurel, but without any convincing conclusions. This phenomena also occurs on the early staters of Thurium (Jameson 352). The proportions in the relief and scale are admirable.

The second type is in strong contrast. The relief is of the rarest delicacy. The artist has been exquisitely successful in conveying the beauty of a maiden approaching maturity. The drawn-in chin and the delicate profile give a sense of modesty and reserve. Beyond faintest doubt this is Demeter's virgin daughter. The hair is tucked in at the back over what appears to be a continuation of the ampyx seen above the forehead. The austerity of the design

is lessened by the loose locks above the ear. The earring, the lion-head pendent to the necklace, as well as the treatment given to the signature, are worthy of note. How unobtrusive this signature is; and yet how perfect its relation to the head.

It seems scarcely to be hoped that any addition to the occurrences of the signature of so well-known an engraver as Aristoxenos remained to be discovered. There is considerable satisfaction in recording an unpublished die signed by him. On the reverse of a unique piece, in Mr. Newell's cabinet, hidden along the edge of the barley-leaf in the smallest letters imaginable, occurs the name of our artist. It is written out as fully as on any of the obverse signatures, and possibly it is complete, although the piece illustrated is worn, and I am unable to be certain. On two other occurrences of this die, muled with another signed obverse, the signature is even less distinct. It is to be hoped that a fleur-de-coin specimen will be discovered in the cabinet of some fortunate collector and that a better preserved piece may settle this question. Nor does the style of this die belie the signature. Although the reproduction can give but a poor idea of the delicacy of the relief, this is not so with the design. How admirable the insect is in its proportionate relation to the ear of barley! The inscription, too, in the size of its letters, is just as it should be. The angle of the awns with the ear, the curve of the leaf, and the delightful combination of all these elements pay further tribute to an artist who could



Reverse of No. 424



realize their decorative value and express it. Small wonder that he signed his work!

Nos. 433 and 434 seem a working-over of the type of No. 424. Some may think the result not so pleasing. The hair treatment is much less simple, and there is a consequent lessening of its effectiveness. The form of the pendent is changed. The reverse does not suffer by comparison with that of No. 424. It shows the artistry of the man who, rather than repeat himself has made a new problem out of very much the same material. In 1869, Dr. Imhoof-Blumer, that great student of the coinage of the Greeks, first published the Heracleian stater (Berliner Blätter, 1870, pp. 32-35) with the signature of Aristoxenos. In discussing further occurrences of our artist's signature, he called attention to the minute letter A on the reverse of this stater of Metapontum. It is found on the lowest grain in the right row. He pointed out that this had not been noticed by Raoul-Rochette in his well-known "Letter to M. le Duc de Luynes," published in 1831, and emphasized the significance of the repetition of the signature of the artist who had designed the obverse.

If, as is possible, this is an abbreviation of the signature of Aristoxenos, we may compare this reverse die with that of No. 424. There are the same exquisite qualities in the design. The curve of the leaf, the placing and the prominence given to the letters, and the proportions of the ear, all reveal the taste and skill of a master. Were it not for the occurrence of

the extended signature of Aristoxenos on the reverse of 424, there might be reason to question Imhoof-Blumer's identification of this letter and consider it a die-break—it is not too convincing in any of the specimens which it has been possible for me to examine.

On Aristoxenos' last signed type (439–445), as with the three preceding, Persephone is to be recognized. This coin evidences anew the versatility of our artist. The profile of the goddess is less winsome than in No. 424, but how perfectly he has modelled the hair as it falls over the neck. The single spray of barley, too, is very happy in its simple directness. There is less of the maidenly immaturity here than in the second type. The first three letters of his name occur on the base of the neck. In all of these dies it is noticeable that Aristoxenos has frankly accepted the limitations of his medium. The results are so wonderful because they show that he has made of these limitations the ladder to his success. There is no under-cutting, no effect gained by exaggeration of one detail at the expense of the others, but there is a thorough understanding of the possibilities of his die medium. And because the strain is evenly distributed, because there are no outlines in high relief to develop into cleavages, this die occurs in combination with no less than seven reverse dies, none of which is found in any other combination.

Since Aristoxenos worked for at least two mints, and as his signed dies are in the proportion of two for

Heracleia to eight for Metapontum, it is probable that he worked at the latter place for the longer period of time. It does not necessarily follow that he abandoned the one to undertake work for the other. He seems to have returned to Metapontum after at least one sojourn elsewhere, for his signed dies at Metapontum are to be divided into at least two classes. In the first, in its two dies, Nos. 419 and 422, Aristoxenos depicts types which had occurred previously. One of these, as has been shown, is the Hygieia type, No. 419, a re-cut die which is not signed in the original state. This, as we have said, may warrant the interpretation that the die was needed so urgently that re-cutting was preferred to waiting for a new die. It may, but probably does not indicate the earliest appearance of Aristoxenos at this mint, since he may have been the author of dies not signed.

In the second class of the work signed for Metapontum, the types are unlike any unsigned dies that have preceded. It would be permissible, therefore, to postulate an interval between the two groups. It is into some such an interval that the Heracles-head group (Nos. 428-430) must be fitted.

A stylistic comparison of the work of Aristoxenos with the Heracles head or with the three reverses associated with it, affords no ground for thinking he could have cut these dies. They are by a distinctly heavier hand, although the forcefulness of the modelling is undeniable. Observe first, however, that

the head is larger than those on any of the preceding staters—not only the die, but the flan is larger. The bold relief of the head takes this increase of the size of the die into consideration, but the head is still too large for the flan, notwithstanding. This die-cutter was obviously not at home in the scale used at Metapontum. The same condition of unaccustomed restraint is to be seen in the three reverse dies. They, too, have nothing in common with any other barley ears in the coinage. The seated Apollo, however, is unlike either the Heracles head or these over-grown barley-ears, and it is difficult to associate it with them as the work of the same hand.

There would be less reason for thinking of Aristoxenos as the author of the seated Apollo figure if we did not have as his signed work the design of the struggle with the Nemean lion. A comparison, despite the difference in theme, shows the same breadth of treatment, and in the Heracleian stater a fitting of the design to the field that distinguishes a worker in relief from a sculptor in the full round. Just such a fitting of the scale and relief of the figure to the size of the die marks the seated Apollo design, and the absence of these qualities in the Heracles head refutes any idea that one hand can have done both. Does it not seem that we have another instance of Aristoxenos having been called to fill the breach—just such another case as we have seen with the Hygieia die mentioned previously, or with the HOMONOIA—DAMATER type? Being called

upon to furnish a die which would replace the Heracles head—a die measuring 22 + mm. as against about 18 mm. customary on the preceding Hygieia series, the artist has created a design which takes full advantage of the increase in size, and which stylistically is quite in keeping with the signed group at Heracleia. Who, beside Aristoxenos, was capable of this?

It does not follow that the Heracles head group should be placed in the series where it is placed on the plates. This grouping is somewhat a matter of convenience, designed to permit the comparison of Aristoxenos' signed work with the seated-Apollo die. The treatment of the eye-ball precludes placing it before the types on Plates XXX and XXXI. The animate subsidiary symbols of the reverse preclude its fitting into the later groups, which are, in almost every instance, connected by muled dies. With additional specimens from some still-to-be-discovered hoard, it may be possible to be more definite in assigning the placement of this group.

With the coins on the preceding plate we come definitely to the end of the pieces signed by Aristoxenos, and the workmanship of the succeeding staters supports the conclusion that, whatever the reason, we no longer have Aristoxenos working at Metapontum. It is not surprising to find types similar to his persisting,—Nos. 446–8 are fairly close to Nos. 435–37; the head is to the right rather than to the left, but the cutting is less skillful and the scale is not quite so well suited to the size of the die.

In looking closely at Nos. 446–8 and 477–479, certain differences in the obverse dies and a very wide divergence in the reverses, force themselves upon the attention. The repairing of the reverse die of No. 446, and the addition of the letters ΛΥ has already been mentioned—the muling of this with the Homonoia die and the reverse symbols on Nos. 478 and 479, establish that the obverse die of Nos. 446–8 is earlier than that of Nos. 477–9. This manner of dividing the ethnic on No. 447, strange to say, does not occur elsewhere on the double relief coinage. Besides this we find the reverse of No. 448 showing the tiny letters ΛΥ within the terminal curve of the leaf.

The obverse die of Nos. 477–479 next claims attention. Here in minute letters beneath the sphendone, the inscription ΟΔΥΛ appears. Reading this retrograde as with No. 446, we have what is probably the name appearing on Nos. 446 and 448. Does the presence of this signature indicate repairing or recutting as it unquestionably did with No. 446? An unqualified answer is not warranted by the specimens known at present, but I believe this to be the case. The relief is higher and I cannot see that the changes in the later state are not entirely possible. The chief of these are the elongating of the neck and the alteration in the form of the earring. The size of the leech-shaped earring has necessitated a heavy globular form on No. 478. The line of the necklace is clear in the first die, while the loop at the back is faint. In the second die, the loop is easily distinguishable,

while the line of the necklace has disappeared in the postulated deepening, and the pendant has taken another angle due to the lengthened neck which now touches the enclosing circle as it did not do in the earlier die.

Looking at the reverses of the second die, Nos. 477-9, we find further matter for thought. None of these reverses are muled with the earlier die. One of them shows an inanimate symbol as well as a longer inscription than is usual up to this time. The locust motif of No. 478 seems copied from No. 450. The A of No. 477 has the double-stroke cross-bar which is to be found in Nos. 483, 484 and 486. To top it all, the reverse die of No. 479 occurs again, with No. 480, in a series that also contains a reverse die with ΛΥ.

Because all these circumstances point in one direction, are we not forced to the conclusion that there must have been an interval between these two obverse dies? I believe that we are, and into this interval the group of coins on Plate XXXV and the two following plates seems to fit. It is first necessary to establish that these constitute a group. There are seven obverse types some of which have several variant dies. On two of these appear inscriptions on the base of the neck,—ΑΠΟΛ and ΠΟΛΥ. The detail of a wreath of leaves, or of a band combined with a wreath of leaves, is repeated almost throughout the "group." Further than this there is found what has not occurred heretofore, the single letter Σ in three instances as well as this letter combined with Π

in two cases, and T in two others. Although fairly homogeneous in style, it has not been found possible to demonstrate any progression, and the absence of mulings makes the ordering within the "group" a matter of judgment. It does appear, notwithstanding this, that this "group" properly precedes No. 480, from which point the mulings establish a sequence at the further end of which these coins could scarcely come. Such details as the presence of the reverse subsidiary symbols preclude their introduction at an earlier stage, and the absence of symbols on the types shown on Plate XXXVI, prohibit their later dating. The reasoning behind the order within the "group" will be submitted as we proceed. A second specimen of No. 478 has been shown on Plate XXXIX (out of numerical order) for the sake of permitting comparisons.

## PLATE XXXVI.

The first of the types on this plate, because of the diadem with its ivy leaves, is unmistakably Dionysus. As has been shown, this belongs with the other dies bearing  $\Sigma$  or  $\Sigma\Pi$  and because of the style of the barley-ear and the absence of symbols, can hardly come later in the city's coinage. There is wide variation in the style of the reverse dies—judging from these alone, one would hardly place them in juxtaposition, but since they are muled with but two obverse dies, there is no other choice. The crudeness of the reverses of



Nos. 456 and 457 is in strong contrast with the finish of No. 453—compare the letters also for their wide variations. So striking is this divergence in No. 457, that I suspect we may have here another die by the hand that cut those of Nos. 531 and 532. A comparison of the reverses supports this, the more so that a similar crude style is not to be found elsewhere among the city's issues. Plated coins of this type are found.<sup>14</sup>

The type on No. 460 is described by Imhoof-Blumer as a "*Panin*"—the delicate horn precludes the identification as Dionysus, and the femininity of the head supports the position of Imhoof-Blumer. This head would take a place among the "heads of nymphs" as the uninscribed and symbol-lacking types that follow are usually described.

The head of Apollo (Nos. 461–462) is unmistakable, because of the laurel wreath. It offers some complications, however, because of the inscription on the base of the neck—ΑΠΙΟΑ—which, from its form one would not hesitate to accept as an artist's signature. On specimen No. 463g this inscription has been read by Mr. E. S. G. Robinson<sup>15</sup> as ΓΑΡ. I have not seen this piece, and on none of those of which I have obtained casts are these letters clear-cut enough to confirm this reading. The well preserved specimen in Berlin shown on Plate XXXVI, No. 463, seems to be indecipherable.

ΑΠΙΟΑ has figured in the literature regarding artists's signatures ever since Raoul Rochette's path-

breaking letter to the Duc de Luynes, and opinion seems fairly divided between regarding this as the beginning of some artist's name, such as Apollonius on the one hand, or as an identification of the type on the other. If we conclude that this is an artist's signature, what shall we say of the sigma which appears below it? If Mr. Robinson's reading for No. 463g is accepted, the second theory is ruled out. In spite of being unable to penetrate the significance of the sigma, I believe the ΑΠΟΛ to be an artist's signature, and that this had taken the form read as ΓΑΡ because of a worn or repaired die. None of the specimens of the second form examined by me are clear and definite—the crudeness of the letters seems to have been present from the earliest stages of the die.

In the light of what has already been said in connection with the sequence of types (page 39), and the alteration of dies (page 28), there are but few details on Plate XXXV that require mentioning. On No. 449, we have a facing head of Demeter (or Persephone) with the inscription ΣΩΤΗΡΙΑ—the identification is unmistakable because of the grain-ears in the hair. This is, therefore, another epithet to add to the Hygieia and Homonoia met previously. The coin's placement at this point is arbitrary, having only the style of the barley-ear, the form of the letters, and the absence of any symbol as justification.

Have we ΝΙΚΑ as an epithet of Persephone in Nos. 450–2? Its later occurrences are both with youthful types (Nos. 488 and 495). Or, despite the

differences in form, have we Nike herself? On No. 452, we have on the reverse the inscription METABO with the B substituted for Π of the immediately preceding type. This is repeated in No. 476, but not elsewhere in the silver issues. It does not seem logical that two occurrences of this form of the ethnic could be responsible for the voluminous literature regarding Metabus, and how the city's name came to be changed to Metapontion. It does seem more reasonable that this is an intrusion of a provincialism. Whether the literary statements which derive support have their independent basis or origins, is a question which must be left to an experienced philologist. But it must be admitted that the form METABO is without the frequency of occurrence that literary statements would seem to imply. The occurrence in more than a single instance is opposed to any explanation that this is merely a die-cutter's error.

#### PLATE XXXVII.

The ivy wreath on Nos. 464-466 identifies a Dionysiac type once more, but one that is obviously feminine. We also have another ivy leaf on the reverse of No. 466, as the subsidiary symbol. On the neck-base we read ΠΟΛΥ, and behind the head, rather than below it as heretofore, is Σ. The other reverse symbols are an alighting owl and a soldier ant (?)—a die-break obscures the insect on most specimens of No. 465. These bear comparison with the

reverse symbols of Nos. 467–472, where we have a laurel (?) leaf, an ant, a standing owl, and two dies showing a grape cluster. Beneath the neck on the obverse are the letters TPO, (with the reading of the first letter questionable), and rather large in scale for an artist's signature. The type would seem to be Demeter, judging from the barley-ear projecting over the forehead and the poppy-bud (?) in the field to right, but the youthfulness may indicate Persephone.

The rather unlovely head on the obverse of Nos. 472 and 475 has close similarities of workmanship with the preceding type (Nos. 467 and 471) especially in the cutting of the profile. The problem of the braided hair was a bit beyond the ability of the artist, but the quality of the reverse is excellent. Imhoof-Blumer identifies the type as a nymph. Nos. 472–473 share their reverse dies, while Nos. 473 and 474 have a common obverse—this time a more successful effort to make the braided hair decorative. This die bears the tiny letters AWA, but none of the specimens extant permit being definite that this is the entire inscription.

#### PLATE XXXVIII.

The sequence of dies up to No. 480 has been covered in the preceding pages; the type of Nos. 480–485 is unlike any that has preceded. Imhoof-Blumer identifies this as the head of a nymph.<sup>16</sup> The fillet binding the hair shows in four successive turns (?) or windings; it leaves a loose top-knot, or rather loose locks of

hair at the top. In the first die, the fillet is represented by a single line; in the second, the line is double, although it barely shows below the top-knot. A slight difference in the earring also serves to distinguish the two dies. There is nothing to identify the obverse type of Nos. 486–487, which is very different in scale from the preceding dies.

As for the reverse symbols, there are the conventionalized lotus and honeysuckle, (2 forms), the quince (?) and the pear. On No. 483 we have the earliest (?) occurrence of letters as a substitute for a symbol. This practice becomes a fairly regular one with the coins of the next plate.

#### PLATE XXXIX.

The head on the die of Nos. 488 and 490 is inscribed NIKA on the neck-base. Neither of the heads on the other dies inscribed thus, show a diadem. The modelling is weak and the design not particularly happy, but in 489 there is an imitation of this weakness with results that are deplorable. The hair above the diadem is indicated by two or three continuous wavy lines, while the flatness of the whole, coupled with the lack of character to the facial outline, leave little that is to be commended. The reverse shows like quality to that of its companion die, but this is not so obvious until it is brought into comparison with its prototype.

Nos. 490 and 491 share a common reverse die,

while No. 492 shares its obverse die with No. 491. Nos. 493 and 494 have a common obverse die. None of these obverse types have any attribute to identify them—a condition that continues until No. 529. The reverse symbols, pomegranate (?), shell and laurel-leaf call for no comment. A tendency to lengthen the ethnic is worthy of noting.

On No. 495 we have Nike with a star-ornamented sphendone, with a pomegranate symbol on the reverse and METAPHONTION. Neither of their dies is associated with any other in my observation. In scale and relief, both dies are out of place in this group. A comparison will show that this type is closely similar to the one at Terina, which, on the basis of style, Sir Arthur Evans considers Kimonian, his impression being “that, if not from the actual hand of Kimon, it was executed in his atelier, and under his immediate inspiration” (Num. Chron., 1912, p. 43). The Metapontum type is even less close to the style of Kimon than that of Terina, but does it necessarily follow that the imitation of the decadrachm types of Kimon and Euainetos implies such direct responsibility on the part of these artists or on the part of their “atelier?” The difficulties in the dating of the later issues at Terina are easily cleared up if one postulates that the imitation of the types of Kimon or of Euainetos need not have taken place during their lifetime.

Nos. 496–497 share a common reverse die, while that of No. 498 is so similar as to be misleading. This is also true of the obverses of Nos. 497–498, where

the placing of the KPI is the most noticeable difference. This obverse shows a die-break in the hair in No. 500 on the succeeding plate.

#### PLATE XL.

No. 500 shares its obverse die with No. 499. Nos. 501 and 502 are connected with the foregoing chiefly by the inscription KPI—compare page 122—for the reasons for thinking that No. 502 may be a recutting of the die of No. 501. Another reason for the placing of these two coins at this point is the absence of either symbols or letters on the reverse dies. The style of the reverse of No. 502, however, seems later than that of its neighbors on the plate.

Nor is there any muling to connect No. 503 with the foregoing types. This die is signed APIΣTI on the base of the neck—the Berlin specimen has been read APIΣTH. The letters behind the head are read Σ⊙AT in the Jameson Catalogue. The third letter might be Λ. This inscription has never been satisfactorily interpreted, so far as I can ascertain. There are several reasons for placing this die here, and although singly they could hardly be called strong, cumulatively, and in the absence of other criteria, they are not lightly to be set aside. The signing on the base of the neck, and the placing of these large letters behind the head occurs on Plates XXXVI, XXXVII and XXXIX. The treatment of the hair finds analogies on Plate XXXIX, as well as among

the types which succeed this (which are further connected by muling). The absence of either symbols or letters on the reverse dies preclude their coming later, where either symbols or letters or both do occur. If the series which they initiate (Nos. 502–527) were to be shifted, they would, therefore, have to come earlier rather than later. This could hardly happen without an overlapping with the preceding groups which, had it occurred, would almost certainly have left evidence in the form of further mulings. Perhaps further hoards may bring such evidence to light.

No. 506 and the variants which follow, is a type of singular beauty and may be considered the apogee of this period. Strength and dignity make an unusual combination with daintiness—the workmanship is impressive. Nos. 507–509 are softer and weaker than their prototype. Note that they use the letters  $\Xi\Omega$  in the field of the reverse, and that No. 511 replaces these with  $\Lambda Y$ , the letters here being larger in scale than those of Nos. 496–498. The type is usually identified as a “head of a nymph” following Imhoof-Blumer’s lead; it is possibly intended as Persephone, although the variation is considerable.

#### PLATE XLI.

The single letter behind the head on No. 510 and 511 ( $\Xi$  or T) gives place to K (retrograde in No. 513) on No. 512—except for this circumstance, it might



have been associated with Nos. 491–492. A comparison, however, shows a difference in the scale of the heads as well as in other respects. We find the reverse symbol of No. 513, a conical helmet, recurring in No. 529, although differing in form. The workmanship begins to show marked deterioration, especially in the cutting of the profile and hair. The relief is no longer sharp-cut and bold, but shallow and weak (compare Nos. 517 and 522). No. 516 is possibly the reflex of No. 473, but very feeble and ineffective, and made amusing in addition, by the upright locks of the coiffure above the forehead.<sup>17</sup>

On the reverse, the letters and symbols seem to alternate—note that Nos. 519 and 520 have the same obverse die, with a leaf as the symbol on one and the letter  $\Phi$  on the reverse of the other. There seems to be a tendency toward lengthening the ethnic although this is perhaps no more than an assumption of greater freedom in this regard on the part of the die-cutter.

#### PLATE XLII.

With No. 524, the feeble die-cutting noted on the coins of the preceding plate seems to have reached its lowest ebb. The leaf-symbol of the reverse is in outline rather than in relief as on No. 521. The alterations to the reverse die of Nos. 525 and 526 have been mentioned (cf. pages 29–30). The added inscription  $\vdash$ HP, serves to connect Nos. 526 and 527. Since certain of the Leukippos type pieces

bear the letters  $\Gamma$ -H, it is possible that we have here a connecting link between the two groups, or the point at which they overlap.

Nos. 528 and 529, owe their position here to the placing of the ethnic on the raised cartellino or band which occurs also on No. 527. The style of the obverses confirms this, but should we find better preserved specimens of No. 528, which is unique and whose symbol is off-flan, they may enable us to assign these types more definitely.

#### FOURRÉE PIECES.

There has been previous discussion of the Fourrée coins (pages 17-19 ff.), and, for purposes of comparison and demonstration, plated pieces have been illustrated along with the genuine ones (Nos. 333, 334, 338, 394, 438). It has seemed desirable, in addition, to illustrate a group of these pieces imitating the types described in the preceding pages. Some of the pieces which I have described as barbaric imitations, especially where I have been obliged to base my judgment on plaster casts without having seen the coins in question, may prove to be plated pieces. The converse of this—that some pieces may have been considered plated mistakenly—is less likely because of the data afforded by the weights. For greater convenience in referring to them, these plated pieces have been given a serial number, just as though they properly belonged to the series. Certain of them may properly belong then, as will be seen.

No. 530 is a typical plated piece. Its resemblance to its prototype, No. 330, is such that it would not arouse suspicion in the mind of any but an experienced collector, but a comparison shows up its superficiality. This is demonstrated in the poorly cut barley-ear as well as in the feeble modelling of the head.

Perhaps the most notorious of these plated coins are Nos. 531 and 532. M. Jameson possesses specimens of both varieties (weight 6.30 and 5.64), while a second specimen of No. 532 is in the collection of Mr. A. H. Lloyd (the one illustrated—weight 5.89). The obverse die is the same for both coins, although part of the inscription is off flan on No. 531. This coin, which, as Mr. Vlasto has pointed out,<sup>18</sup> appears to have come from Garrucci's collection, is described by Garrucci as bearing the name ΚΙΜΩΝ. No. 532 shows this reading to be untenable, for the completed inscription is ΤΑΕΠΙΝΟΝ. Even if these pieces were not plated, the form of this inscription provides insurmountable objections to the claim that we have here an indication of an alliance coinage for Terina and Metapontum. The type imitated, however, is Metapontum's (cf. Nos. 366–383 on the plates) rather than Terina's, if we may judge from the use of the fillet-bow at the back, but a comparison with the Terina types will make apparent more quickly than many pages of description, how closely similar some of these issues of nearby cities were, and afford support for the theory promulgated by Mr. Keary<sup>19</sup>

that such similarity is an indication of competition in a common market.

No. 533 is an imitation of the die of Nos. 450–452. The flatness of the modelling and the omission of the sigma in the field below the chin show at once that something is wrong; the style of the reverse confirms it. I have seen only a cast of No. 534—the modelling is flat, and the cutting of the braided hair encircling the head is misunderstood, while the letters of the reverse, which are over large, and the mouse, which is over-plump, are unlike the neighboring dies of this group. A single specimen is known (The Hague), and neither die is found muled—weight 7.70.

No. 535, however, is unquestionably plated (weight 5.05). It imitates the same die, No. 472. The difference in the style of the reverses is to be noted—the similarity to No. 472 is patent.

On the strength of the statement of Dr. von Dressel, No. 536 was placed among the plated pieces—a course which seemed the more warrantable because of the crescent shaped gouge, on the reverse, presumably made for testing. The weight (6.93) is not far below the normal. It was stated in addition, that this and two other coins—one weighing 7.53 and the other 6.63—were from the same dies, but no other specimens from these dies had been found by me, and as one of these three pieces was described as being plated, I wrote to the Director of the Berlin Cabinet, Dr. Regling, asking him to confirm whether these were genuine and plated specimens from the same pair of

dies. Dr. Regling's reply informed me that one of the three pieces had been sold as a duplicate (Hess sale 1902), and that the piece weighing 6.93 which had been explicitly described as being plated, although encrusted with greenish oxidation, was, in his opinion, not plated. The second coin, weighing 7.63, was not suspect, and as it was impossible to trace the third piece, there was no proof that it was plated. In consequence, this variety should be placed in the series between Nos. 485 and 486, as it provides another obverse die in this series, the reverse having the same symbol as No. 481.

Nos. 539 to 541 afford new problems. No. 541 comes from the Picard Sale (Sambon, March 13, 1923, 115), and weighs 7.00. Mr. A. H. Lloyd, in whose collection this piece now is, very courteously sent me a cast, and when I told him of my suspicions, carefully examined the piece for indications of plating. Neither he nor Mr. Forrer, who also examined it, were able to find any indications whatever of plating.

It will be seen, however, that the reverse of this piece is the same as that of No. 540, and that the obverse of No. 540 is the same as the obverse of No. 539. Both Nos. 539 and 540 are plated. The testimony of two such experienced numismatists as Mr. Lloyd and Mr. Forrer was not lightly to be set aside, and while endeavouring to find the way out of this dilemma, I rediscovered a coin in Mr. Jameson's collection, No. 428, which I then remembered having connected with Mr. Lloyd's coin previously. Another

specimen from the same pair of dies had occurred in sales (Hirsch, XXX, 285; Naville, IV, 169; Naville, X, 143), and on mentioning the circumstance to Mr. Newell, I was informed that this second piece was in his collection. Mr. Jameson's piece weighs 5.72, Mr. Newell's piece 7.36. On examination Mr. Newell's piece proved to be unquestionably plated.

If, therefore, the coin in Mr. Lloyd's collection is not plated, we have the condition that both its obverse and reverse dies occur elsewhere only in plated coins. That his coin is not plated, in spite of showing no traces, though not impossible, is very improbable. The possibility is lessened by the circumstance that Messrs. Jameson's and Newell's pieces are of Croton, while the other three are coins of Metapontum. Since we have five coins from two obverse and three reverse dies, imitating the coins of two different mints with a resemblance which will not withstand close comparison of the type imitated, it seems that we may safely conclude that here we have neither barbaric imitations nor official pieces made for trial purposes in the mint, but ancient counterfeits made illicitly. Some of the barbaric imitations look to have been struck with debased silver (this is true of No. 344), but so far as my observation at Metapontum is concerned, these barbaric imitations are not plated. The *fourrée* pieces, therefore, are to be divided into at least two classes, official trial-pieces and counterfeits.

No. 542 will be seen to be closely similar to Nos.

506 and 509. This specimen in the Brussels Cabinet was examined, at my request, by M. Tourneur, who informed me that there is not the slightest visible evidence of its being plated. The weight is 6.86. But that which most awakens suspicion of the coin's being an official issue is the reverse. Here the base of the barley-ear is in exceptionally high relief tapering sharply toward the apex. The symbol, a poppy head (?) and the inscription KAA occur on one of the varieties of the series with the head of Zeus, others of which have KAA on the reverse but not the symbol. The dies, however, in spite of their being so close in subject are very different in style. All this does not preclude No. 542 being a barbaric imitation, although in my observation such imitations rarely muled dies not customarily associated.

No. 543 is an imitation of No. 498, but without the letters behind the head and otherwise differs radically from the type imitated. The weight is 6.60.

Nos. 544 and 545 seem to be imitating the type of Nos. 497 to 500, but again the barley-ear reverses are radically different from any of the imitated types. It should be noted that the same obverse die serves for Nos. 544 and 545. Similarly a common die serves for the obverses of Nos. 546 and 547. In this case the imitation is of Nos. 521 or 523, and the reverses are worthy of careful attention for it will be seen that the cross bar of the T is lacking in No. 546, and that this has been added in No. 547, together with a leaf similar to that which appears on No. 494, although in this case it is upside down, as is shown by its veining.

Other specimens of plated coins might be submitted but these are typical. They seem to indicate that the practice was more prevalent at the close of the period covered by this monograph than at its beginning.

### HOARD MATERIAL.

The available data regarding hoards is frequently of little value in the coinage of Metapontum, because of the indefiniteness of the identification of the varieties comprised. We know of very few hoards whose burials can be assigned to the period of 450–350 B.C., but this purely negative circumstance hardly warrants us in thinking that this section was free from hostile incursions during this interval. We do know, however, that Terina was destroyed by the Brettians in 356, and if there may have been a truce with the Italic peoples up to this time, it is certain that there was a state of warfare from the middle of the century to its close.

The famous Carosino hoard which has already played a large part in the chronology of the issues of the Tarentum,<sup>20</sup> is of great significance in any study of South Italian coins. Unfortunately, our record covers a portion of its contents only and for this reason is robbed of some of its significance. The portion obtained for the Taranto Museum by its Director, Dr. Quagliati, and published by him,<sup>21</sup> is possibly not much more than a quarter of the whole, judging from the statements of Sir Arthur Evans and M. Vlasto.



Combining the information available from all of these sources, we learn that the hoard was composed of coins of Tarentum of the III and IV periods (380 to 334 B.C.); at least one coin of Heraclea (with the signature KAA) and coins of Thurium, (one of the variety with MOΛOΣΣOΣ) as well as of the following numbers in my classification for Metapontum: one thick flan incuse, and Nos. 404, 406b (?), 416, 437, 449, 483, 485, 491, 493, 507, and one Leukippos head stater with a cluster of grapes behind the head and a poppy seed-pod for symbol on the reverse. The pieces acquired by Dr. Quagliati indicated above are marked by an asterisk.

The date of the burial of the hoard as assigned by M. Vlasto, 336–334, seems to be in accord with the evidence furnished by the Metapontum pieces in the find, and as is to be expected, the types coming at the end of my arrangement are the more numerous. The occurrence of the Leukippos type is significant for the succeeding rather than for the present portion of my study. On the basis of the Metapontine issues alone there is reason for dating the burial about 340.

# DESCRIPTIONS

310. Die of No. 257 (cf. Pt. I).

R. METΑΠ. Five grains of barley forming a star, the center of which is a pellet, the letters of the inscription being separated by the grains. The M is still archaic.

a.	R. Jameson, 264	-	-	-	-	-	-	-	-	7.76
b.	Br. Mus. Cat. 45	-	-	-	-	-	-	-	-	8.06
c.	Berlin (struck over transitional Corinth)	-	-	-	-	-	-	-	-	7.93
d.	Berlin	-	-	-	-	-	-	-	-	6.99
e.	Berlin	-	-	-	-	-	-	-	-	7.74
f.	Paris	-	-	-	-	-	-	-	-	7.25
g.	Vienna	-	-	-	-	-	-	-	-	6.89
h.	Vienna	-	-	-	-	-	-	-	-	6.80
i.	Cambridge (McClean 915)	-	-	-	-	-	-	-	-	7.20
j.	Copenhagen	-	-	-	-	-	-	-	-	7.87
k.	A. H. Lloyd	-	-	-	-	-	-	-	-	7.94
l.	Hirsch VII, 39	-	-	-	-	-	-	-	-	—
m.	Hirsch XIII, 139 (Rhousopoulos)	-	-	-	-	-	-	-	-	7.40

311. Die of No. 261 (cf. Pt. I).

R. AEΔΛON (retrograde): AΨEΛO<O. Facing nude figure of a man with the horns and ears of a bull. The beard is obscured by a die-break. His right hand holds a patera (*phiale mesomphalos?*), his left, a reed. A scarf which is knotted to his left arm passes behind the back and falls freely (?) over the right arm at the elbow. The cable border is poorly cut.

a.	R. Jameson, 265	-	-	-	-	-	-	-	-	7.62
b.	Paris, De Luynes 466	-	-	-	-	-	-	-	-	7.55

- c. Berlin (cf. Zeit. Num. I, 293—illustr.  
Pt. I of this work, Pl. xxi; M. Fox  
coll., ex Dupre, 47) - - - - - 7.47

311½. Die of Nos. 261 and 311 (Pt. I).

R. AΨEΛO<O (retrograde): AE⊙ΛON (also retrograde). Type of 311—the figure is taller and the extended arm longer. The drapery to the left is separated from the body by a wider interval. The thetas and omicrons of the inscr. are rounded rather than diamond shaped as in 311. The border is beaded instead of having the cable form.

- a. Naples - - - - -

312. METĀ: Well-proportioned barley ear with nodule at base. Border of dots on a raised rim.

R. Heracles with club and strung bow in l. hand—the bow-string parallel with the club. The lion-skin covers his head and falls from his shoulders as he stands before an altar holding a patera. Above his right hand is an object described in the British Museum catalogue as a bucranium, but which is possibly a fountain-spout. The low-relief border shows even less understanding of the method of cutting the cable pattern than No. 311.

- a. Br. Mus. Cat. 51- - - - - 8.22  
b. Paris (De Luynes 467) - - - - - 7.80  
c. Berlin, ex Löbbecke - - - - - 7.66  
d. Strozzi Sale, 984 - - - - - 7.38

313. Die of No. 312.

R. Nude standing figure of Heracles with club over his right shoulder. His l. hand rests on his

hip—hanging from the wrist is a bow, its string parallel with his body.

a.	Br. Mus. Cat. 50-	- - - - -	8.14
b.	Berlin	- - - - -	7.25
c.	Cambridge (McClean 917, ex Strozzi 985)	- - - - -	6.32
d.	Munich (ex Hirsch XXXI, 43)	- - -	6.90
e.	A. H. Lloyd, ex Headlam 210 and Hirsch XXVI, 221	- - - - -	7.92

**314.** Die of Nos. 312 and 313.

R. Nude figure of Apollo standing with an unstrung bow in his left hand, and a branch or small tree with very large leaves in his right.

a.	Br. Mus. Cat. 47	- - - - -	7.87
b.	Vienna	- - - - -	7.97
c.	Copenhagen	- - - - -	7.62
d.	Hermitage	- - - - -	—
e.	R. Jameson 266	- - - - -	8.02
f.	E. T. Newell	- - - - -	7.48
g.	Count Chandon de Briailles	- - -	7.70
h.	Hirsch XV, 540	- - - - -	7.84
i.	Naville X, 62	- - - - -	7.88
j.	Ratto, 1926, 466, ex Naville V, 445	- -	7.65

**315.** Similar to No. 312—the base of the ear is nearer the border.

R. Similar to 314—the branch is more nearly perpendicular.

a.	Paris	- - - - -	7.81
b.	Delbeke Sale 22	- - - - -	7.84
c.	Naville I, Pozzi, 165	- - - - -	7.59

**316.** Die of No. 315.

R. Similar to 315 save that the leaves are much smaller.

a.	Br. Mus. Cat. 46	- - - - -	8.01
b.	Berlin, ex Peytrignet	- - - - -	7.59
c.	Berlin, ex Löbbecke	- - - - -	7.37
d.	Paris (De Luynes 465)	- - - - -	8.07
e.	The Hague	- - - - -	6.40
f.	Munich, ex Hirsch XXX, 173	- - - - -	7.98
g.	Hirsch XVIII, 2207-	- - - - -	7.94
h.	Naville X, 62, ex Naville V, 444	- - - - -	7.88

**317. Die of Nos. 315 and 316.**

R. Similar to 316, save that the head is smaller. the bow longer and the lower end of the branch at a greater distance from the badly-standing figure.

a.	Vienna	- - - - -	7.63
b.	Berlin	- - - - -	7.71
c.	Cambridge, McClean 919	- - - - -	7.62
d.	A. H. Lloyd, ex Sir H. Weber 745	- - - - -	7.24
e.	Polese Sale 244, ex Sambon-Canessa, 1927, 308	- - - - -	6.70

**318.** Similar in form to 312 and 315, but of much poorer workmanship.

R. A rather coarse version of 317—the figure is shorter and heavier.

a.	W. H. Woodward 18, ex Collignon Sale 30 and Nervegna 458	- - - - -	8.04
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**319. METÀ:** Short barley ear with long stem. In the field to r., a grasshopper, head upwards. Border similar to 312. Fault in die at upper right.

R. Similar to preceding Apollo-types, save that the lower end of the branch rests upon an altar. The British Museum coin shows a small plant at lower r.

a.	Br. Mus. Cat. 48	- - - - -	7.50
b.	" " " 49	- - - - -	7.89
c.	Paris	- - - - -	—

d.	Berlin, ex Fox	- - - - -	7.79
e.	Vienna	- - - - -	7.98
f.	Boston, Regling-Warren 70	- - - - -	7.78
g.	Cambridge, McClean 918	- - - - -	7.75
h.	Berlin	- - - - -	7.88
i.	Brussels, De Hirsch	- - - - -	7.75
j.	E. T. Newell, ex O'Hagan 50, Montagu 41 and Hoffman	- - - - -	7.78
k.	Hess, Berlin Dupl. and Greau Coll.	- - - - -	—
l.	Naples, Fiorelli 2349	- - - - -	—
m.	Pozzi, Naville I, 166	- - - - -	7.09
n.	Hamburger, 1929, 45, ex Löbbecke	- - - - -	6.93
o.	Naville XII 394, 395	- - - - -	7.54
p.			7.20
q.	Hirsch XII, 16	- - - - -	—

320. :META. Barley ear with no stem showing, in a circle of dots on a raised rim.

R. Nude male figure (Apollo) standing with his r. hand on his hip, and looking to r. He holds a strung bow in his l. hand. A laurel-wreath encloses the whole.

a.	Naville XIV, 32	- - - - -	3.96
b.	Br. Mus. Cat. 52	- - - - -	3.61
c.	Berlin, ex Fox	- - - - -	3.80
d.	Berlin, ex Peytrignet	- - - - -	3.63
e.	Cambridge, McClean 920	- - - - -	3.66
f.	Naples, Fiorelli 2350	- - - - -	—
g.	Vienna	- - - - -	2.64
h.	Hunterian, 27-	- - - - -	3.40
i.	E. T. Newell, ex Headlam 211 and Hartwig 215	- - - - -	3.80
j.	A. H. Lloyd, ex Ratto, 1912, 248 ex Hirsch XXVI, 22-	- - - - -	3.92
k.	Baron Pennisi di Floristella	- - - - -	—
l.	Hess, Berlin Dupl. 297	- - - - -	—
m.	Hirsch XIV, 84	- - - - -	3.70

321. "Lean" barley ear with five grains and two small additional terminal ones. Leaf to l. In the field at right a cross-headed torch (?)—cf. Ward, 'Greek Coins and their Parent Cities,' p. 10 for Mr. Hill's note. This object is also identified as a 'bird-frightener.' Border of dots.

R. (AT) : (reading not certain). Barley ear similar to that on the obv. In field at r., a poppy plant bearing seed-pod.

a.	Berlin (struck over Croton)	- - - -	7.74
b.	Berlin	- - - -	7.71
c.	Br. Mus. Cat. 58	- - - -	7.57
d.	Metropolitan Mus. of Art (Ward). 59	-	7.81
e.	R. Jameson 267	- - - -	7.82
f.	Berlin, (from Turkey)	- - - -	7.81

322. Female head in profile to r., wearing a band that is narrow at the front, but gradually broadening—a sphendone (?). A thick veil falls in a graceful curve over the back of the head. The ear-ring hangs parallel with the edge of the veil, rather than perpendicularly. In form it is like those occurring on the Demareteion and contemporaneous tetradrachms of Syracuse. The hair treatment is early in style. In front of the face is an object like that on the obv. of No. 321.

R. ΑΠΘ: ΜΕΤ. Barley ear with six grains in left and middle rows respectively and seven in r.

a.	J. P. Morgan Coll., ex Strozzi 987	- -	7.60
b.	Berlin, ex Gansauge-	- - - -	7.74
c.	Gotha	- - - -	—
d.	E. T. Newell	- - - -	7.14

- e. A. H. Lloyd (ex Bement 171 and Hirsch  
XXVI, 277) - - - - - 7.25
- f. Naville XIII, 76- - - - - 6.92

323. Similar to 322 with differences in the fold of the veil.

R. ΠONT: META. The ear is much larger than in 322, with but six grains to each row and seven awns on either side of the one at the apex. All specimens show a recutting of the rev. die—the ΠONT is over some previous inscr.—apparently META. The length of the abbreviation for the ethnic is unusual at this period—the extension may be an effort to cover an error.

- a. R. Jameson 280 - - - - - 7.47
- b. Br. Mus. Cat. 146 - - - - - 7.57
- c. Berlin, ex Imhoof-Blumer - - - - - 7.72
- d. Berlin, ex Fox - - - - - 7.56
- e. Vienna - - - - - 6.16
- f. Ratto Sale, 1/25/26, 489, ex Hirsch  
XXX, 186 - - - - - 7.86
- g. Carelli 66. Garrucci CIII, 26 - - - - - —

324. Female head facing r., with fillet or spen-done only slightly like that of 323—in the modelling and the treatment of the profile, it is very close.

R. META: Π Six-grained ear with small additional terminal grains—in the field to r., a broad leaf.

- a. E. T. Newell, ex Naville XII, 419 - - 7.79

325. Female head to l. with fillet tied in a bow at the back. The faint line of a necklace shows, and a pendant hangs in front.



R. MET: Seven-grained barley ear in low relief, with leaf to r.

a. Berlin	- - - - -	7.60
b. Vatican	- - - - -	—
c. The Hermitage	- - - - -	—

### 326. Die of 325.

R. METAI: Six-grained barley ear with short leaf to r.

a. Berlin, ex Löbbecke	- - - - -	7.35
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### 327. Die of 325.

R. TEM: Leaf to r. The ear is larger and fuller than in 325.

a. Naville XV, 145, ex Nav. VI (Bement), 164	- - - - -	7.96
b. Cambridge, McClean 922, ex Hirsch XI, 42	- - - - -	7.67
c. Copenhagen	- - - - -	8.03
d. A. H. Lloyd	- - - - -	7.30
e. De Sartiges Coll. 36-	- - - - -	—
f. Naville XII, 396	- - - - -	6.53

### 328. Same die as 325.

R. :MET Seven-grained barley ear with leaf to

#### l. Straight-line awns without barbs.

a. Paris, De Luynes 474	- - - - -	7.74
b. Munich	- - - - -	—
c. Brussels, De Hirsch	- - - - -	7.40
d. Berlin	- - - - -	7.42
e. Vienna	- - - - -	7.85
f. Naples, Fiorelli 2403	- - - - -	—
g. Sambon-Canessa Sale, 1927, 309	- - - - -	7.75
h. Polese Sale 246, ex Vogel Sale, Mar. 1929, 68-	- - - - -	7.79
i. Commerce	- - - - -	—

329. Same die as 325.

R. MET Six-grained barley ear with leaf to l.

- a. E. T. Newell - - - - - 7.35
- b. Naville I, Pozzi, 174 - - - - - 7.48

330. Female head to l. wearing fillet but without ear-ring. Head small in proportion to width of flan. A thin necklace is visible.

R. MET: Thick leaf to r. close to base of the ear.

- a. E. T. Newell - - - - - 7.98
- b. Vienna - - - - - 6.82
- c. Naples. Fiorelli 2404 - - - - - —
- d. R. Jameson 283, ex Strozzi 989 - - - 8.03
- e. W. Gedney Beatty - - - - - 7.47
- f. Naville XV, 146, ex Naville V, 456,  
Hirsch XXVI, 223 and Hirsch  
XXXII, 2 - - - - - 7.78
- g. Naville X, 64, ex Naville I, Pozzi, 173  
and Hirsch XV, 557 - - - - - 7.87

331. Female head to r. wearing fillet, necklace and ear-ring. A bipennis is beneath the tranche, a leaf directly before the eyes, a sturdy branch behind the head, and beneath the chin the letter B(?)—the lobes separated. This object also occurs on the early staters of Croton and Velia, and its resemblance to the medieval fire-steel presents the possibility that it is not the letter B. The occurrence of single letters so early is unusual at Metapontum, but so too, is the number of subsidiary symbols. The whole is in a circle of dots.

**R. Die of 330.**

a.	Br. Mus. Cat. 135	- - - - -	7.63
b.	E. T. Newell	- - - - -	7.76
c.	R. Jameson 270	- - - - -	7.51
d.	A. H. Lloyd	- - - - -	7.52

**332. Die of 331.**

**R. MET:** Leaf to r., but at a greater distance from the ear than in 331. The awns show barbs.

a.	Br. Mus. Cat. 134	- - - - -	7.31
b.	E. T. Newell	- - - - -	7.90
c.	A. H. Lloyd, ex Hirsch XXVI, 246-	- - - - -	7.52
d.	Helbing Sale, Nov. 1928, 3366	- - - - -	7.62

**333.** Closely similar to 325—the necklace and pendant are absent.

**R. :META** Seven-grained barley ear tapering toward apex. Leaf to l.

a.	Paris—fourrée	- - - - -	5.25
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**334.** Male head to r. with ram's horn and ear. A wreath of olive extends forward from the ear three leaves projecting over the forehead. The hair is stringy. The type is identified as Apollo Karneios, Zeus Ammon and a river-god—for discussion and citations, see p. 14.

**R. Die of 333.**

a.	Br. Mus., ex Bunbury 140-	- - - - -	6.50
b.	Vienna	- - - - -	6.58
c.	Berlin—possibly fourrée	- - - - -	6.20
d.	H. A. Greene, Providence, fourrée	- - - - -	—

**335.** Similar to 334, but in higher relief. The locks of hair are thicker. In field to l. a die-flaw or an indefinite symbol (?).

**R.** Die of 333 and 334.

a.	Brussels, De Hirsch	- - - - -	7.88
b.	Br. Mus. Cat. 67	- - - - -	7.85
c.	Cambridge, McClean 931	- - - - -	7.13
d.	Late Coll. (Rothschild), Soth. 1900,		
	47 - - - - -	- - - - -	7.71
e.	Egger XLV, 142	- - - - -	6.45
f.	Vienna — questionable — possibly		
	fourrée - - - - -	- - - - -	4.87

**336.** Same die as 335.

**R.** :META Twisted leaf to l.—the outermost awns shorter than the others.

a.	Berlin, ex Peytrignet	- - - - -	7.92
b.	Berlin, ex Imhoof-Blumer	- - - - -	7.77
c.	Munich - - - - -	- - - - -	—
d.	Naples, Fiorelli 2353	- - - - -	—
e.	The Hermitage	- - - - -	—
f.	Sir. C. W. C. Oman, ex Hartwig 217	- - - - -	7.45
g.	Hirsch XX, 49, ex Hess, Berlin Dupl.,		
	301 - - - - -	- - - - -	7.70

**337.** Same die as 335 and 336.

**R.** Eight-grained barley ear—leaf to l.

a.	Paris, De Luynes 472	- - - - -	7.95
b.	Paris - - - - -	- - - - -	7.50
c.	Turin, 17971	- - - - -	7.70
d.	Boston - - - - -	- - - - -	7.45
e.	Vienna - - - - -	- - - - -	7.77
f.	R. Jameson 272	- - - - -	7.84
g.	De Sartiges 33, ex Durufle 71 and		
	Well-known Coll. 153—Regling-		
	Warren 71 - - - - -	- - - - -	6.91

h.	Benson 53, ex Montagu 42	- - - -	7.71
i.	Hirsch XII, 19	- - - -	—
j.	R. Cyril Lockett, ex Naville VI. Be- ment, 169 and Hirsch XV, 551	- - - -	7.80
k.	Bunbury I, 139	- - - -	7.79
l.	Naville IV, 73, ex Sir H. Weber 748	- - - -	7.51
m.	Sir H. Weber 749	- - - -	7.64
n.	Ratto Sale 4/4/1927, 205, ex Nervegna 459	- - - -	7.69

**338.** Similar type—head larger, more broadly treated and in low relief.

R. METÀ Wide, six-grained barley ear.

a.	Gotha	- - - -	5.48
b.	Berlin—fourrée, ex Imhoof-Blumer	- - - -	6.30
c.	Naville XIII, 79, fourrée	- - - -	6.45

**339.** Similar to 335 save that the hair hangs straighter and the ear is smaller.

R. Die of 338.

a.	A. H. Lloyd, ex Picard Sale, 119	- - - -	7.39
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**340.** Die of 339.

R. Six-grained ear with small additional terminal grains. The E of the ethnic is up-tilted.

a.	E. T. Newell, ex Headlam 233 and O'Hagan 52	- - - -	7.39
b.	Br. Mus.	- - - -	7.14
c.	Wotoch Sale, 1901, 108	- - - -	—

**341.** Similar to 340, but the relief is higher and the strands of hair thicker.

R. Die of 340.

a.	A. H. Lloyd	- - - -	7.23
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**342.** Similar to 340, but larger in scale.

R. A weakly-modelled seven-grained ear with a slanting die-break through the E and extending across the entire flan.

a. S. P. Noe - - - - - 7.10

**343.** Similar to 334—weakly modelled.

R. Tapering seven-grained ear with a crudely curved leaf to right.

a. Paris - - - - - 7.45

**344.** Die of 343.

R.  $\overline{\text{ET}}$  Six-grained ear of crudest workmanship. The leaf to the l. is very angular, and the M of the ethnic is omitted altogether.

a. Naville VI, Bement, 168 - - - - - 7.64

**346.** Four-grained ear with an ant (?) in field to right.

R. Full-face bull's head with horns curving downward.

a. Berlin, ex Fox - - - - - 0.37

**347.** Five-grained ear with faint linear (?) border.

R. Small head of man-headed bull (Achelous) in profile to r., with small annulet in front and behind.

a. Br. Mus. Cat. 57 - - - - - 0.73  
 b. Berlin - - - - - 0.78  
 c. Berlin, ex Imhoof-Blumer - - - - - 0.775  
 d. Turin, Fabretti 916 - - - - - 0.75  
 e. E. T. Newell, ex Sir. H. Weber 746 - 0.69

**348.** Similar—the border heavy.

R. Similar—the head larger and with a bad die-break diagonally to r. upward.

a. Berlin, ex Imhoof-Blumer - - - - 0.705

**349.** Die of 348.

R. Similar to 347—the annulets larger.

a. Br. Mus. Cat. 56 - - - - 0.80

b. Cambridge, McClean 921 - - - - 0.74

**350.** Broad, five-grained ear with a small lizard in field to r.

R. Large head with the line of moustachio showing diagonally across the beard.

a. Paris, De Luynes 516 - - - - 0.66

b. Br. Mus. Cat. 55 - - - - 0.74

**351.** Six-grained ear with flat top—border of dots.

R. Three crescents with the convex sides adjacent, and with a pellet in each of the arcs and one at the center of the die.

a. Berlin, ex Fox - - - - 0.50

b. Vienna - - - - 0.59

**352.** ME: Tapering, five-grained ear in high relief.

R. Similar to 351.

a. British Museum ex Sir H. Weber, 742

Roman Sale, 1883, 70 - - - - 0.60

b. Berlin - - - - 0.64

c. Pozzi 164 - - - - 0.53

**353.** Five-grained ear in low relief.

R. Crescents smaller, and with pellets near the rim.

a. Vienna - - - - - 0.54

**354.** Six-grained ear in high relief, with small leaf to r., the whole in border of dots.

R. Similar—the pellets large, and the tips of the crescents tapering.

a. Berlin, ex Nervegna 487 and Merzbacher, Nov. 1910, 101 - - - - - 0.49

**355.** Six-grained ear.

R. Similar to 353.

a. Berlin, ex Löbbecke - - - - - 0.57

**356.** Five-grained ear in border of heavy dots.

R. Similar—the central pellet is larger, and a linear border is present.

a. Paris, DeLuynes 517 - - - - - 0.62

**357.** Square-topped, five grained ear in high relief, touching the border at its base.

R. Similar to 353—the central pellet large.

a. Berlin - - - - - 0.56

**358.** Five-grained ear.

R. Similar to foregoing—the tips of the crescents touch, and the enclosing linear circle is heavy.

a. Sir. Arthur J. Evans (not illustrated). -



359.  $\dot{\text{MET}}$  (?) Six-grained ear.

R. Similar to 355.

a. Munich (not illustrated). - - - - -

360. Six-grained ear with olive leaf (?) in field to r., the whole in border of dots.

R. Five (?) crescents touching the linear rim at their extremities—large pellet in center. Possibly double-struck—condition very poor.

a. Vienna - - - - - 1.01

361.  $\dot{\text{ME}}$ : Tapering, four-grained ear in border of heavy dots.

R.  $\dot{\text{AT}}:\dot{\text{ME}}$  Five-grained ear in low relief, with long stem.

a. Berlin, ex Imhoof-Blumer - - - - - 0.36

362. Five-grained ear touching border of dots at its base.

R.  $\dot{\text{ME}}$  In field to l. an ivy (?) leaf.

a. British Museum, ex Sir H. Weber. 743 - 0.40

363. Youthful, horned head to r., similar to that on preceding plate.

R.  $\dot{\text{META}}$ : Weakly modelled five-grained ear. Leaf to r.

a.	Br. Mus. Cat. 68	-	-	-	-	-	-	-	-	1.12
b.	Vienna	-	-	-	-	-	-	-	-	1.14
c.	Vienna	-	-	-	-	-	-	-	-	1.23
d.	Naples	-	-	-	-	-	-	-	-	—
e.	Munich	-	-	-	-	-	-	-	-	—
f.	E. T. Newell	-	-	-	-	-	-	-	-	1.08

**364.** Similar—the head larger, the neck shorter.

R. Similar to 363—the T lower than the top of the E and A.

- |    |                          |   |   |   |   |   |   |   |   |       |
|----|--------------------------|---|---|---|---|---|---|---|---|-------|
| a. | Pozzi 180                | - | - | - | - | - | - | - | - | 1.02  |
| b. | Berlin, ex Imhoof-Blumer | - | - | - | - | - | - | - | - | 1.01  |
| c. | Berlin, ex Löbbecke      | - | - | - | - | - | - | - | - | 1.125 |
| d. | The Hague                | - | - | - | - | - | - | - | - | 1.35  |

**365.** Similar

R. Similar to 364, but inscr. not in a straight line.

- |    |          |   |   |   |   |   |   |   |   |  |
|----|----------|---|---|---|---|---|---|---|---|--|
| a. | Commerce | - | - | - | - | - | - | - | - |  |
|----|----------|---|---|---|---|---|---|---|---|--|

**366.** Youthful female head to r., (Kore) wearing a double fillet which crosses just above the ear, and whose ends project in an S-loop at the back. The hair-treatment is simple—a parting line shows above the ear. The line of the nose and forehead is almost straight. The drawn-in chin and the high cheek-bone create an impression of beauty but newly matured. The eye-ball is without the iris. A small ear-ring, in the shape of a dagger, sometimes is not to be seen, having failed to withstand wear or over-zealous cleaning. The head, in low relief, and admirably proportioned to the flan, is enclosed by a broad linear circle.

R. :METĀ Slender, six-grained barley ear, with additional terminal grains, and with leaf to l.

- |    |                                       |   |   |   |   |   |   |   |   |      |
|----|---------------------------------------|---|---|---|---|---|---|---|---|------|
| a. | E. T. Newell, ex Benson 55 and Arche- |   |   |   |   |   |   |   |   |      |
|    | ologist, 14                           | - | - | - | - | - | - | - | - | 7.69 |
| b. | The Hague                             | - | - | - | - | - | - | - | - | 7.60 |
| c. | Vienna                                | - | - | - | - | - | - | - | - | 7.92 |
| d. | Naples, Fiorelli 2367                 | - | - | - | - | - | - | - | - | —    |
| e. | Hirsch XV, 549                        | - | - | - | - | - | - | - | - | 7.98 |
| f. | Hirsch XXIX, 47                       | - | - | - | - | - | - | - | - | 7.80 |

**367. Die of 366.**

R. Similar to 366, but the barbs on the awns are slightly more pronounced and the inscription is further removed from the ear.

- a. Naville, X, 68, ex Naville I (Pozzi), 176 7.80
- b. E. T. Newell - - - - - 6.68
- c. Sir C. W. C. Oman - - - - - —

**368.** Closely similar to 366; differences in the hair above the forehead, in the width of the fillet at the back, and in the form of the loop.

R. Die of 367.

- a. G. Empedocles - - - - - 7.90

**369. Die of 368.**

R. ·METĀ The A of the inscr. nearer the outermost awn than the M. The E has its cross-bars up-turned.

- a. S. P. Noe - - - - - 7.72

**370.** Similar. The die-surface is greater than heretofore, and the head larger in scale. The cheek is overmodelled, which leaves the ear with the effect of being set in a depression.

R. The inscription in slightly larger letters The awns are separated by a wider interval, the ear is broader.

- a. R. Cyril Lockett, ex Hirsch XXI, 356 - 7.92
- b. E. T. Newell - - - - - 6.90
- c. T. C. Schmuck, ex Nav. XII, 403 - - 7.85
- d. Mrs. O. S. Thrasher - - - - - 7.75
- e. Feuadent Sale, 1913, 33, ex Hirsch  
XVI, 93 - - - - - 7.80

- f. Sambon-Canessa, Dec. 1907, 33 - - - 7.70
- g. Naville XII, 403, ex Guzman, 76 and  
Delbeke, 23 - - - - - 7.84
- h. Sotheby Sale, 1905 (H. P. Smith), 22 - -.—

**371.** Similar to 370—the hair above the ear and the loop of the fillet differ.

R. Die of 370.

- a. Cambridge—Lewes Coll. - - - - - -.—
- b. Whereabouts unknown (Cast). - - - -.—

**372.** Similar to 367, but larger in scale.

R. The E of the inscr. has very short cross-bars.

- a. Paris - - - - - -.—

**373.** Similar to 367—the loop of the fillet shows a die-fault slightly off the perpendicular.

R. :META Six-grained ear with small additional terminal grains—the right stroke of the A is in line with the base of the ear.

- a. Berlin - - - - - 7.93
- b. Vatican - - - - - -.—
- c. Naville X, 69, ex Naville IV, 71, Egger  
XLV, 150, Hirsch XXVI, 224 - - 7.80
- d. Naville X, 67, ex Naville IV, 70- - - 7.89

**374.** Die of 373—a die-flaw now shows below the eye.

R. :META Short and tapering six-grained ear with tiny additional terminal grains. The awkward curve of the leaf makes an almost right-angled turn, (cf. reverse of 375).

- a. Naville XIII, 78 - - - - - 7.98

**375.** *Reverse die of 373.***R.** Reverse die of 374.

- |    |                            |   |   |   |   |   |   |   |   |      |
|----|----------------------------|---|---|---|---|---|---|---|---|------|
| a. | Berlin                     | - | - | - | - | - | - | - | - | 7.70 |
| b. | Cambridge, McClean 914     | - | - | - | - | - | - | - | - | 6.95 |
| c. | Count Chandon de Briailles | - | - | - | - | - | - | - | - | 7.66 |

**376.** Similar to 373, but with slight differences in the ear-ring, and fillet-loop**R.** Similar to 373; the ear is smaller and inscr. differs.

- |    |         |   |   |   |   |   |   |   |   |      |
|----|---------|---|---|---|---|---|---|---|---|------|
| a. | Vienna  | - | - | - | - | - | - | - | - | 7.78 |
| b. | Vienna  | - | - | - | - | - | - | - | - | 7.74 |
| c. | Dresden | - | - | - | - | - | - | - | - | 7.77 |

**377.** Similar—the hair much finer and more regular. The ear-ring is short and shaped like a grape-cluster.**R.** :META Broad, square-topped ear of six grains.

- |    |                          |   |   |   |   |   |   |   |   |      |
|----|--------------------------|---|---|---|---|---|---|---|---|------|
| a. | Boston—Regling-Warren 78 | - | - | - | - | - | - | - | - | 7.65 |
| b. | Copenhagen               | - | - | - | - | - | - | - | - | 7.57 |
| c. | Seabey Sale II, 96       | - | - | - | - | - | - | - | - | —    |

**378.** Similar to 377—a die-break connects the tip of the nose and the lips.**R.** :META Similar to 371—the A has its first stroke parallel with the perpendicular stroke of the T.

- |    |                                  |   |   |   |   |   |   |   |   |      |
|----|----------------------------------|---|---|---|---|---|---|---|---|------|
| a. | Paris, De Luynes 478             | - | - | - | - | - | - | - | - | 7.83 |
| b. | E. T. Newell                     | - | - | - | - | - | - | - | - | 7.94 |
| c. | Cambridge, McClean 929, ex H. P. | - | - | - | - | - | - | - | - |      |
|    | Smith Sale, 22                   | - | - | - | - | - | - | - | - | 7.89 |

**379.** Die of 378—a later state.

R. Similar to 378—the top of the inscr. almost touches the awn.

- |    |                           |           |      |
|----|---------------------------|-----------|------|
| a. | Naville V, 452            | - - - - - | 7.84 |
| b. | Cast—present whereabouts? | - - - - - | —.   |

**380.** Similar to 377—the hair in higher relief.

R. Die of 379.

- |    |   |           |      |
|----|---|-----------|------|
| a. | A. H. Lloyd, Hill's Select Greek Coins, |           |      |
|    | XXX, 3                                  | - - - - - | 7.96 |
| b. | Arolsen                                 | - - - - - | —.   |

**381.** Die of 380.

R. Ear similar to 380, but inscr. further removed.

- |    |                                      |           |      |
|----|--------------------------------------|-----------|------|
| a. | E. T. Newell, ex Naville VI, 167 and |           |      |
|    | Hirsch XXXI, 45-                     | - - - - - | 7.75 |
| b. | E. T. Newell                         | - - - - - | 7.55 |
| c. | E. S. G. Robinson                    | - - - - - | —.   |
| d. | H. R. Drowne                         | - - - - - | —.   |
| e. | Hirsch XXXIV, 43                     | - - - - - | 7.90 |

**382.** Badly broken die—possibly 378-9.

R. Similar—die-break at middle of the ear.

- |    |                                 |           |      |
|----|---------------------------------|-----------|------|
| a. | The American Numismatic Society | -         | 7.75 |
| b. | Commerce                        | - - - - - | —.   |

**383.** Similar to 370, but the modelling is better.  
The line of the nose and forehead is slightly curved.

R. Similar to 381.

- |    |                           |           |      |
|----|---------------------------|-----------|------|
| a. | Boston, Regling-Warren 77 | - - - - - | 7.68 |
| b. | Br. Mus                   | - - - - - | 7.65 |
| c. | Berlin                    | - - - - - | 7.93 |
| d. | Paris                     | - - - - - | 7.90 |
| e. | Vienna                    | - - - - - | 7.63 |
| f. | Vienna                    | - - - - - | 6.75 |
| g. | Naples (Stevens)-         | - - - - - | —.   |

h.	Cambridge, Corpus Christi—Lewes	
	Coll - - - - -	—
i.	Dresden - - - - -	7.59
j.	R. Jameson, 271 - - - - -	7.93
k.	Hoyt Miller - - - - -	7.73

## HEADS WITHOUT FILLET-LOOPS AT BACK

384. Similar, but without either fillet-loop or ear-ring.

R. :MET. Six grained ear with small additional terminal grains. Twisted leaf to l.

a.	Glasgow, Hunterian 15- - - - -	7.78
b.	Hamburger Sale, 5/29/29, ex	
	Löbbecke - - - - -	7.80
c.	Hirsch XXIX, 49, ex Benson 56 - -	6.95
d.	Naville XII, 401 - - - - -	7.72

385. Similar to 384, but fillet is much narrower

R. Six-grained ear with square top. The inscr. close to the awn.

a.	Br. Mus., ex Sir H. Weber Coll., 757 -	7.98
b.	Berlin - - - - -	7.90
c.	White-King Sale, 1909, 22, ex Hirsch	
	XV, 548 - - - - -	7.71

386. Die of 385—a die-break has obliterated the ear-ring.

R. :MET The inscr. very compact.

a.	Glasgow, Hunterian 14- - - - -	7.69
b.	Berlin - - - - -	7.90
c.	Munich, ex Hirsch XXXI, 46 - - -	7.85
d.	Naples, Fiorelli 2365 - - - - -	—
e.	Vienna - - - - -	7.19
f.	Comte Chandon de Briailles - - -	7.39
g.	Ratto, 1927, 202 - - - - -	7.70
h.	Commerce - - - - -	—

**387.** Similar to 384—possibly same die; die-break in hair at top.

R. Die of 384.

- a. Toronto, Royal Ontario Archeol. Mus. - —.—
- b. E. T. Newell - - - - - 7.65

**388.** Closely similar to 387, but another die, although there is a die-break in the same position. The ear-ring differs—the lower eye-lid also. Behind the head, K.

R. ATEM: A seven-grained ear entirely different from the preceding ones, with a small hook-shaped leaf to l. and a larger one to r.

- a. Naville X, 71, ex Naville IV, 72 and Sir  
H. Weber 761 - - - - - 7.41
- b. Berlin - - - - - 7.56
- c. E. T. Newell - - - - - 7.66

**389.** Same die as 388.

R. :METĀ Ear similar to that of 388; a small leaf curves to r. beneath the inscr., a larger one to l.

- a. Milan - - - - - 6.70
- b. Picard Sale (Sambon, 1923), 117, ex  
Strozzi, 997- - - - - 7.93

**390.** Head of a mature woman, to r., without necklace or ear-ring. The fillet binding the hair does not cross behind the ear, but suspends a strand of hair, from which the ends hang loosely.

R. METĀ: Six-grained ear with almost straight (but twisted) leaf to r.

- a. Hoyt Miller, ex Naville XII, 404 - - 7.41



**391.** Head similar to No. 390, but with a stalk of barley in front of the lips (with a curved leaf beneath the chin) and another behind the head. The curves of a ribbon or fillet show across the tranche of the neck.

**R.** Similar to 390—the ear more compact, and the leaf to r. curved gracefully.

a.	E. T. Newell, ex Durufle, 67	-	-	-	-	7.58
b.	Br. Mus. Cat. 65	-	-	-	-	7.71
c.	Paris	-	-	-	-	6.30
d.	Cambridge, McClean 926	-	-	-	-	7.44
e.	Copenhagen	-	-	-	-	7.68
f.	W. Gedney Beatty	-	-	-	-	7.55

**392.** Die of No. 391.

**R.** Long, well-modelled, seven-grained ear.

a.	Berlin, ex Löbbecke	-	-	-	-	7.72
----	---------------------	---	---	---	---	------

**393.** Similar to 391, but coarser—the leaves beneath the neck-tranche are copied uncomprehendingly.

**R.** Similar to 390–391 in placing of inscr. and leaf, but the ear is lop-sided—the left row is narrower than the right one.

a.	Brussels, De Hirsch	-	-	-	-	7.44
----	---------------------	---	---	---	---	------

**394.** A fairly close imitation of 390 so far as detail is concerned, but larger in scale and lacking in spirit.

**R.** ΣΕΤ. Flat, six-grained ear with awkwardly curved leaf to r.

a.	Hunterian 16, fourrée	-	-	-	-	—
b.	Naples (illustrated), fourrée	-	-	-	-	—

**395.** Mature, female head to l., similar to 391 in treatment. The hair is fastened at the back by a fillet, one end of which hangs free. Entwined in this fillet are two stalks of barley, one of which projects above the forehead. The second, parallel with the line of the fillet, is to be seen on unworn coins only—it lies just above the ear. The leaf of this second stalk extends from the point at which the fillet is tied, to the crown of the head. A pendant is visible, but not the line of the necklace.

R. METÀ: Similar to 392 save that the leaf curves differently.

a. Berlin	- - - - -	7.76
b. Br. Mus. Cat. 60	- - - - -	7.55
c. Copenhagen	- - - - -	7.85
d. Naples, Stevens	- - - - -	—
e. Naville XII, 397	- - - - -	7.73

**396.** Female head to l. without ear-ring or necklace. The hair is bound by a string of pearls (the Benson catalogue describes it as wreathed with barley). The knot of the fillet shows at the back. The face has a decidedly unpleasant expression.

R. MET(A): Leaf to r. Broad six-grained barley ear.

a. De Sartiges, 37, ex Benson 52	- - -	7.71
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**397.** Die of 395.

R. :META Seven-grained ear, with praying mantis, head upward, to l. The barbs on the awns are on the outer side.

a. Naples, Fiorelli, 2405	- - - - -	—
b. Paris	- - - - -	7.40

c.	Berlin, ex Imhoof-Blumer	- - - -	7.70
d.	The Hermitage	- - - -	—
e.	Vienna	- - - -	7.76
f.	Vienna	- - - -	6.92
g.	Cambridge, McClean, 923-	- - - -	7.52
h.	E. T. Newell	- - - -	6.70
i.	W. Gedney Beatty	- - - -	7.63
j.	Henry A. Greene	- - - -	—
k.	Naville X, 65, ex Bement, 165 and Hirsch XXVI, 232	- - - -	6.84
l.	R. Cyril Lockett	- - - -	—

398. Similar to 395—a bead necklace is now visible.

R. METĀ: Six-grained ear with praying mantis to r. Die-break at upper left.

a.	Paris	- - - -	7.50
b.	E. T. Newell	- - - -	7.72
c.	Berlin, ex Löbbecke	- - - -	7.82
d.	Hunterian 18	- - - -	7.64
e.	R. Jameson 274	- - - -	7.82
f.	A. H. Lloyd	- - - -	7.96
g.	E. T. Newell (2nd)	- - - -	—
h.	Mrs. O. S. Thrasher	- - - -	7.04
i.	Archeologist (Evans) 12	- - - -	7.48
j.	Naville V, 457	- - - -	7.73
k.	Hirsch XXX, 179	- - - -	7.75
l.	Cahn Sale 60, 82	- - - -	7.11
m.	Seaby II, 98 ex Polese, 245	- - - -	—
n.	Spink's Circular 53436	- - - -	7.78

399. A crude imitation of 395—the ear is very badly modelled, and the pendant a mere pellet.

R. Similar to 398; the first three letters of the inscr. bunched, and smaller than the A. The mantis is well modelled.

a.	Berlin, no trace of plating	- - - -	6.74
b.	Br. Mus. Cat. 61, plated (?)	- - - -	6.91

400. Remotely similar to the type on Plate 29—a single line of the fillet shows. It does not cross either at the back or front. The hair treatment is less careful. The eye shows one—possibly two, dieflaws.

R. :METĀ Six-grained ear with very broad leaf to l.

a.	Brussels, De Hirsch	-	-	-	-	-	-	-	-	7.95
b.	Munich	-	-	-	-	-	-	-	-	—
c.	Vienna	-	-	-	-	-	-	-	-	7.52
d.	Sir. C. W. C. Oman	-	-	-	-	-	-	-	-	—
e.	A. H. Lloyd	-	-	-	-	-	-	-	-	—

401. Die of 400.

R. METĀ: Six-grained ear with leaf to r.

a.	Berlin	-	-	-	-	-	-	-	-	—
b.	Arolsen	-	-	-	-	-	-	-	-	—
c.	Hirsch XXXIV, 42	-	-	-	-	-	-	-	-	7.90

402. Female head to r., with necklace and triple-pendant ear ring. Behind the ear a fillet or band shows—in front, this consists of but a single line. The ends of a lock of hair show at the back above the band. A die-flaw shows at the outer extremity of the eye. Behind the head  $\Xi$ .

R. :METĀ Six-grained ear with small additional terminal grains. Leaf to l.

a.	R. Jameson, 292	-	-	-	-	-	-	-	-	7.83
b.	Paris	-	-	-	-	-	-	-	-	—
c.	Cambridge, Leake	-	-	-	-	-	-	-	-	7.84
d.	New York, The American Numismatic Society	-	-	-	-	-	-	-	-	—
e.	Hirsch XXX, 183	-	-	-	-	-	-	-	-	8.65?
f.	E. T. Newell, ex Sambon-Canessa, 1927 310	-	-	-	-	-	-	-	-	7.25

**403.** Probably the die of 402 deepened—the head is in higher relief—the flaw at the eye has been eliminated, and the necklace is barely discernible.

**R. Die of 402.**

- [illegible]

**404.** Similar to Kore type, but the fillet line shows even less than in No. 401. Neither necklace nor ear ring are present—can this be intended as a man's head? Behind the head is a retrograde K. The relief is low.

R. METÀ: Six-grained ear, with small additional terminal grains. Broad leaf to r., with grasshopper above, head upwards, both in low relief.

- |    |                               |           |      |
|----|-------------------------------|-----------|------|
| a. | E. T. Newell                  | - - - - - | 7.70 |
| b. | Berlin                        | - - - - - | 7.69 |
| c. | Vienna                        | - - - - - | 7.32 |
| d. | Munich-                       | - - - - - | —    |
| e. | Naples                        | - - - - - | —    |
| f. | Hermitage                     | - - - - - | —    |
| g. | Taranto—Carosino Hoard-       | - - - - - | 7.75 |
| h. | Cambridge, McClean, 930-      | - - - - - | 7.83 |
| i. | A. H. Lloyd                   | - - - - - | 7.90 |
| j. | De Sartiges 35, ex Benson 58- | - - - - - | 7.64 |
| k. | Headlam 230, ex Hirsch XXVI,  | 227 -     | 7.23 |
| l. | Dr. N. Petsalis, Athens       | - - - - - | —    |
| m. | Polese Sale, 254              | - - - - - | —    |
| n. | Commerce (2)-                 | - - - - - | —    |

**405.** Apparently the die of 404 with the face and lower part of the hair recut (deepened in the die). The letter behind the head is a reversed or retrograde E, replacing the K.

R. METĀ: Ear with six grains in the l. row, seven in the r. Leaf to r. with grasshopper, head upwards in high relief, above it.

a.	Berlin, ex Imhoof-Blumer -	-	-	-	-	7.80
b.	Vienna -	-	-	-	-	7.66
c.	Br. Mus. Cat. 54-	-	-	-	-	7.91
d.	Paris, De Luynes, 479 -	-	-	-	-	7.75
e.	Naples, Santangelo -	-	-	-	-	—
f.	Naples, Fiorelli, 2406 -	-	-	-	-	—

406. Similar to 390, especially in the hair-arrangement. The symbol beneath the chin, whether identified as a seed-pod of the poppy or as a lotus bud, tends to confirm the identification of the type as Demeter. Note the difference in the treatment of the eyeball as compared with Pl. 28 and 29.

R. Die of 405.

a.	Naville VI. 166 ex Ready Sale, 68 -	7.75
b.	R. Cyril Lockett ex Pozzi 168 -	7.85

407. Die of 406.

R. :META Curved leaf to l. with alighting bird facing to r. above it.

a.	Boston, Regling, 73 -	-	-	-	-	8.00
b.	Brit. Mus., ex Hirsch XX, 53 and Hirsch XV, 547 -	-	-	-	-	7.28
c.	Berlin -	-	-	-	-	7.89
d.	Naples, Fiorelli, 2407 -	-	-	-	-	—
e.	E. T. Newell -	-	-	-	-	7.60
f.	R. Jameson, 294 -	-	-	-	-	7.06
g.	Naville V, 449- -	-	-	-	-	6.65
h.	Sambon-Canessa, 1927, 312, ex Ratto, 1/25/26, 469 -	-	-	-	-	7.75

**408. Die of 406.**

R. METÀ: Curved leaf to r. with bird alighting, facing to l. above it.

a. Berlin	- - - - -	7.81
b. Munich	- - - - -	—
c. Naples, Stevens	- - - - -	—
d. Ratto Sale, 1912, 250	- - - - -	7.82

**409.** Similar to 406–8, but a different die; there are two instead of three loose tresses at the back of the neck.

R. Similar to 408, but both the ear and bird are larger.

a. Berlin, ex Löbbecke-	- - - - -	7.96
b. Paris-	- - - - -	—
c. Vienna	- - - - -	7.60
d. Copenhagen	- - - - -	7.79
e. Pozzi 169, ex Strozzi, 998	- - - - -	7.70

**411.** Youthful, female head to r., similar in details to the older head on Nos. 390–393 and 407–410, but smaller in scale, and wearing ear ring. In minute letters, along the tranche of the neck, is the inscr.  $\text{ΥΓΙΕΙΑ}$ , identifying the type, or possibly used as an epithet, in this case with Persephone understood, (cf. Head). The enclosing linear circle is frequently off-flan.

R. Thick leaf to l. The barbs on the outermost awn to l. (only) are on the outside.

a. Br. Mus. Cat. 62-	- - - - -	7.84
b. A. H. Lloyd	- - - - -	7.26
c. Sir H. Weber, 754	- - - - -	7.77
d. Naville XII, 399	- - - - -	7.32

412 Die of 411

R.  $\overline{\text{META}}$ : Leaf to r.

- |    |  |           |      |
|----|--|-----------|------|
| a. | R. Cyril Lockett, ex Pozzi, 170                                    | - - -     | 7.65 |
| b. | Vienna   | - - - - - | 7.58 |
| c. | Naville XII, 398, ex Strozzi, 1000 and<br>Sambon-Canessa, 1907, 34 | - - - -   | 7.67 |

413. Die of 411-2.

R.  $\text{T}:\overline{\text{ME}}$  The ear is in low relief.

- |    |   |           |      |
|----|---|-----------|------|
| a. | Brussels-   | - - - - - | 7.97 |
| b. | Berlin, ex Fox  | - - - - - | 8.03 |
| c. | Vienna  | - - - - - | 6.44 |
| d. | Boston  | - - - - - | 7.86 |
| e. | Berlin  | - - - - - | 7.90 |
| f. | The Hague, Six Coll.                                  | - - - - - | 7.40 |
| g. | Naples, Fiorelli, 2364                                | - - - - - | 7.44 |
| h. | R. Jameson, 293                                       | - - - - - | 7.74 |
| i. | E. T. Newell, ex Merzbacher, 1910,<br>102             | - - - - - | 7.37 |
| j. | Count Chandon de Briailles, ex Num.<br>Straniero, 864 | - - - - - | 7.93 |
| k. | Strozzi, 999  | - - - - - | —    |
| l. | Naville V, 448  | - - - - - | 7.74 |
| m. | Naville V, 447, ex Merzbacher, 1909,<br>2240          | - - - - - | 7.70 |
|    | ex Num. Straniero, 249                                | - - - - - | 7.71 |
|    | ex Egger XLV, 151                                     | - - - - - | 7.72 |
| n. | Naville XV, 148                                       | - - - - - | 7.63 |

413½. Die of 413.

R.  $:\overline{\text{ME}}$  Leaf to l. with a curve closely similar to that of 413.

- |    |                           |         |      |
|----|---------------------------|---------|------|
| a. | Berlin, ex Imhoof-Blumer- | - - - - | 7.90 |
|----|---------------------------|---------|------|

414. Closely similar to 411-413, but without trace of inscr.



R. Similar to 413, but with an A above the curve of the leaf.

- |    |                                    |      |
|----|------------------------------------|------|
| a. | Cambridge, McClean, 925, ex Hirsch |      |
|    | XV, 545 - - - - -                  | 7.60 |
| b. | Aberdeen - - - - -                 | 8.27 |
| c. | A. H. Lloyd - - - - -              | 7.55 |

415. Similar to Hygieia type, but without inscr. and now enclosed in a wreath. Note that ear ring hangs diagonally.

R. A:  $\overline{\text{MET}}$  Leaf to left with A above it.

- |    |                                     |      |
|----|-------------------------------------|------|
| a. | Spink's Circular 53392, ex Headlam  |      |
|    | 231 and Maddelena 352- - - - -      | 7.18 |
| b. | Cambridge, McClean, 927- - - - -    | 7.65 |
| c. | Munich - - - - -                    | —    |
| d. | Hirsch XIV, 86 - - - - -            | 7.84 |
| e. | Helbing, 10/24/27, 2547, ex Pozzi,  |      |
|    | 167 - - - - -                       | 7.42 |
| f. | Seabey I, 533, ex Ratto, 1926, 467, |      |
|    | ex Sir H. Weber 756 - - - - -       | 7.77 |

416. Die of 415.

R. Die of 413½. The coin chosen for illustration is unfortunate in its reverse which has been tooled or over-cleaned. In this process the die flaw at the outer awn between the two letters has been removed—this flaw is the simplest way of identifying the die. It is in its initial stage in No. 413½.

- |    |                                      |      |
|----|--------------------------------------|------|
| a. | E. T. Newell - - - - -               | 7.25 |
| b. | Berlin - - - - -                     | 7.78 |
| c. | Boston - - - - -                     | 7.93 |
| d. | Dresden- - - - -                     | 7.51 |
| e. | Gotha - - - - -                      | —    |
| f. | Taranto, Carosino Hoard - - - - -    | 7.67 |
| g. | R. Jameson, 268, ex Hirsch XV, 541 - | 7.32 |
| h. | E. P. Robinson, Newport - - - - -    | 7.65 |

i.	A. H. Lloyd - - - - -	7.87
j.	W. H. Woodward, 19—Naviile XV, 149, ex Naviile V, 450 (Br. Mus. Dupl.) - - - - -	7.81
k.	Ratto 1926, 468, ex Naviile V, 451 - -	7.51
l.	Naviile X, 66, ex Naviile IV, 69 and Sir H. Weber, 755- - - - -	7.64
m.	Naviile XIII, 77, ex Benson 54 and Montagu, 43 - - - - -	7.84
n.	Sambon (Picard), 1923, 116 - - - -	—
o.	Helbing sale, Nov. 1928, 3339 - - -	7.75

**417.** A barbaric (?) copying of 416–7. The leaves of the wreath are outlined rather than modelled in relief. Both the ear ring and the knot of hair at the back are poorly cut.

R. A crude copy of 416.

a. Br. Mus. Cat. 53- - - - - 6.19

**418.** Die of 415–6, now much worn.

R. MET:—between the leaf to left and the ear. In field to r., a crayfish or lobster with head upwards.

a.	Vienna - - - - -	7.67
b.	Berlin - - - - -	8.02
c.	Arolsen - - - - -	—

**419.** Die of 415–6 and 418, now recut—apparently in an unsuccessful effort to remove the die-break which has begun to show in 418 over the earring. Signed in tiny letters, on the neck-tranche, APIΣT(—)—the last letter is uncertain.

R. Die of 418.

a.	Berlin, (cf. Friedlander, Archeol. Zeitung 1847, p. 118)- - - - -	7.68
b.	Vienna, Richter Coll.—Num. Zeit. 1914. p. 221, Pl. I, 30. - - - - -	7.54

**420. HOMONOIA.** In a linear circle, a female head facing to l. The hair is fastened by a fillet which shows at the back of the head. A large earring is of the 'leech' form. A lentoid pendant is suspended from a plain necklace which is tied in a loop at the nape of the neck.

R. A:  $\overline{\text{MET}}$ , the A inverted. The barley ear is similar to No. 415.

- |    |                                |           |      |
|----|--------------------------------|-----------|------|
| a. | Paris, De Luynes, 473          | - - - - - | 8.00 |
| b. | Br. Mus. Cat, 59-              | - - - - - | 7.99 |
| c. | R. Jameson, 269, ex Ashburnham |           |      |
|    | Sale, 12                       | - - - - - | 7.92 |

**421.  $\Delta\text{AM}..A(\text{TEP})$**  Die of 420 with inscr. altered by the introduction of a 'torch,' and the recutting of the letters not covered by the torch. The necklace is now beaded. A diebreak disguises the earring and extends in a curve toward the crown of the head. Cf. Imhoof-Blumer, *Rev. Suisse*, 1908, p. 137 (249).

R. Die of 420.

- |    |  |           |      |
|----|--|-----------|------|
| a. | Boston, ex Bunbury Sale, 124 (Cf. Greenwell, <i>Num. Chron.</i> , 1897, p. 270). | - - - - - | 8.05 |
| b. | Paris  | - - - - - | 7.55 |
| c. | Naples   | - - - - - | —    |
| d. | E. T. Newell, ex Naville V, 446  | - - -     | 7.61 |

**422.** In a linear circle, wreathed head of Demeter facing to l., wearing necklace of beads and earring. The wreath consists of six pairs of olive(?) leaves—the one on the right of the lowest pair is larger than the others—the British Museum Cat. suggests that

it is of ivy. ΑΠΙΣΤΟΞΕ. Across the tranche of the neck, in tiny letters. The earring is in the form of an inverted pyramid with two beads pendant on either side—cf. coins of Locris and Elis illustrated in the Br. Mus. Cat. of Jewelry, p. 180.

R. :META Seven-grained barley ear—the barbs are on the outer side of the awns. Leaf to l.

a.	Boston, Regling-Warren, 74	-	-	-	-	7.90
b.	Paris, De Luynes, 475	-	-	-	-	7.65
c.	Berlin, ex Fox-	-	-	-	-	7.88
d.	Cambridge, McClean, 924-	-	-	-	-	7.57
e.	Brussels, De Hirsch -	-	-	-	-	7.81
f.	The Hermitage -	-	-	-	-	—
g.	R. Jameson, 273 -	-	-	-	-	7.56
h.	Vicomte de Sartiges, 39-	-	-	-	-	—
i.	W. Gedney Beatty -	-	-	-	-	7.43
j.	Locker Lampson Catalogue, 19	-	-	-	-	8.02
k.	Munich, ex Hirsch XXVI, 231	-	-	-	-	7.47
l.	Naville XIII, 80, ex Carosino Hoard	-	-	-	-	7.90
m.	Naville XIII, 81, ex Egger XLV, 149	-	-	-	-	7.72

423. Die of 422.

R. For descr. see 424.

a.	Berlin, ex Imhoof-Blumer -	-	-	-	-	7.70
b.	Br. Mus. Cat. 74 (struck over B. M. C. Corinth Pl. VII, 6).	-	-	-	-	7.87
c.	The Hermitage -	-	-	-	-	—
d.	E. T. Newell, ex Nervegna, 470 and Feuardent, 1913 (Mathey), 34	-	-	-	-	7.59
e.	E. T. Newell -	-	-	-	-	7.06

424. Youthful female head (Kore) facing to left, wearing earring, ampyx and necklace with a pendant in the form of a lion's head. The hair is gathered in a

roll at the back, but the locks over the ear are loose. Behind the neck is a large A, beneath the cross-bar of which the remainder of the signature is to be seen—PIΣTO. The whole is enclosed in a linear circle.

R. :META. Seven-grained barley ear with leaf to r.; in the field to l. a locust, head upwards. Along the line of the leaf, in microscopic letters, is the name APIΣTOΞE. The last two letters are not certain.

a. E. T. Newell - - - - - 7.48

#### 425. Die of 424.

R. :METV—the A inverted. Leaf to l.—above it, a small gourd (possibly an alabastron). The ear though slender in comparison with 424 is beautifully proportioned.

a. A. H. Lloyd, ex Hirsch XXX, 177 - - 7.60  
 b. Br. Mus. Cat. 72- - - - - 7.54  
 c. Paris- - - - - 7.60  
 d. E. T. Newell, ex Hirsch XV, 555, and  
 Maddalena, 349 - - - - - 7.70  
 e. R. Jameson, 275 - - - - - 7.80

#### 426. Die of 424.

R. :METAPON. Slender barley ear with leaf to l.—beneath, and hanging therefrom, a small vial or gourd.

a. E. T. Newell, ex Naville XII, 418, and  
 Sambon-Canessa, Dec. 1907, 35 - - 7.53  
 b. Paris- - - - - 7.26  
 c. Strozzi Sale, 1006 - - - - - —  
 d. Naville XV, 159 - - - - - 7.41

**427.** Same die as 424, but with signature recut. Apparently the alteration has been made by planing down the field and recutting the new surface. A die-break has developed at the end of the ampyx, and another below the earring.

R. A :MET̄ The interval between the letters is unusually large. The leaf is to the l.—above its tip is the letter A to complete the inscription.

- |    |                                |           |      |
|----|--------------------------------|-----------|------|
| a. | Berlin, ex Peytrignet          | - - - - - | 8.08 |
| b. | R. Jameson, 276                | - - - - - | 7.79 |
| c. | Bourgey Sale, May, 1910, 13    | - - - - - | —    |
| d. | Helbing Sale, Nov., 1928, 3340 | - - - - - | 7.80 |

**428.** Head of beardless Herakles in lion's skin. to r.

R. METĀ: Large and broad barley ear with six grains to each row. Cicada with head upwards in field to l.

- |    |   |           |      |
|----|---|-----------|------|
| a. | E. T. Newell, ex Bunbury 136, and<br>Sir H. Weber, 747- | - - - - - | 7.39 |
| b. | Naples, Fiorelli, 2352                                  | - - - - - | —    |
| c. | Turin, Royal Coll. 17979                                | - - - - - | 7.90 |
| d. | Paris-  | - - - - - | —    |
| e. | G. Empedocles, ex Nervegna, 457                         | - - - - - | 7.65 |

**429.** Die of 428.

R. :METĀ Similar to 428—the ear is slightly smaller. The cicada is in higher relief, and the angle of its wings more acute.

- |    |                      |           |      |
|----|----------------------|-----------|------|
| a. | Berlin, ex Löbbecke- | - - - - - | 7.30 |
|----|----------------------|-----------|------|

**430. Die of 428.**

**R. Large and broad barley ear with six grains to each row. Locust with head upwards in field to r.**

a. Berlin, ex Löbbbecke-	- - - - -	7.92
b. Berlin, ex Fox	- - - - -	7.43
c. British Mus.	- - - - -	—
d. Paris, De Luynes, 470	- - - - -	8.00
e. Cambridge, McClean, 939-	- - - - -	7.21
f. Cambridge, McClean, 941, ex Hirsch XXI, 361	- - - - -	7.89
g. A. H. Lloyd, ex Num. Straniero Sale, 1909, 870	- - - - -	7.49
h. Baron Pennisi de Floristella, Acireale	- - - - -	—
i. E. P. Robinson, Newport, R. I.	- - - - -	7.55

**431. Apollo, nude, facing to r., seated on a four-legged stool, holding a lyre on his knee. The drapery covers his l. thigh and falls from the seat of the stool. In the field to r., the trunk of a tree; the whole in a circle of dots.**

**R. Die of 430.**

a. Vienna	- - - - -	7.55
b. Lecce—in the Rev. Num., 1915, p. 84, note 2, it is stated that there is a unique specimen of this stater in the Museum at Lecce. Prof. E. Salvaggi, writing to Prof. Dott. S. Mirone under date of May 21, 1922, stated that this piece had been stolen by a visitor to whom the former director had accorded the privilege of examining the museum's coins	- - - - -	—

**432. Female head to r.—a crude imitation of the type on Plates 28 and 29. The crossed fillet of that series has not been understood by the cutter of this die, although the fluttering ends behind the head**

indicate what he has been attempting to copy. Compare also the cutting of the ear. The coarse hair and the heavy features should be noted.

R. :META Six-grained barley ear, wider in the middle than at the ends. Leaf to l. The modelling is weak and the retrograde lettering of the inscription very crude. Possibly a barbaric imitation.

a. Berlin - - - - - 7.16

433. Female head (Kore) to l. The ampyx and earring are as in 424, but the hair-treatment is less careful. A globular pendant hangs from a necklace tied in a loop at the back. On the tranche of the neck is the signature APIΣTO.

R. :META The slender, six-grained ear is beautifully proportioned. Twisted leaf to l. On the lowest grain to the right is the letter A(?). The upper half of the outermost awn to the left has the barbs on its outer side—for the lower part, they are inward.

a. Munich-	- - - - -	- .—
b. Berlin, ex Imhoof-Blumer-	- - - - -	7.80
c. Berlin -	- - - - -	8.04
d. Brussels, De Hirsch-	- - - - -	7.73
e. Vienna -	- - - - -	7.54
f. Cambridge, Lewes Coll.	- - - - -	- .—
g. Vienna -	- - - - -	6.64
h. E. T. Newell -	- - - - -	7.65
i. E. T. Newell -	- - - - -	6.93
j. R. Jameson, 277 -	- - - - -	7.78
k. S. P. Noe -	- - - - -	7.50
l. Ratto Sale, 1/25/26, 477 -	- - - - -	7.39
m. Sambon-Canessa, 1927, 311 -	- - - - -	7.35
n. Brandis Sale 76 -	- - - - -	7.30
o. Helbing Sale, Nov., 1928, 3341 -	- - - - -	7.86



## 434. Die of 433.

R.  $\overline{\text{META}}$  Six-grained barley ear with leaf to l. and kantharos above. Note die-fault in line with upright stroke of T.

a.	Bement 191	- - - - -	7.64
b.	Vienna	- - - - -	7.62
c.	Cambridge, McClean 971	- - - - -	7.78
d.	E. T. Newell, ex Cahn Sale # 61, 19 and Neville XII, 417	- - - - -	7.87
e.	A. H. Lloyd	- - - - -	7.78
f.	Spink's Numismatic Circular 53397, ex Egger XLV, 152 and Strozzi	- - - - -	7.84
g.	Commerce	- - - - -	—

435. Female head to l. wearing ampyx, necklace with bifurcate pendant, earring and sphendone ornamented with eight four-pointed stars. Short locks of loose hair are above the ear and the sphendone. A tiny spray of barley (often erased by over-cleaning) is behind the head, tip downward. On the tranche of the neck  $\text{API}\Sigma\text{TO}(-)$ . The whole is in a linear circle.

R.  $\text{A}:\overline{\text{MET}}$  Six-grained ear with leaf to l. and A above it.

a.	Sir H. Weber 753, ex Bunbury I, 122?	-	7.97
b.	Paris	- - - - -	—
c.	Berlin	- - - - -	7.71
d.	Vienna	- - - - -	7.52
e.	Munich	- - - - -	—
f.	Cambridge, McClean 970	- - - - -	7.97
g.	E. T. Newell	- - - - -	7.05
h.	A. H. Lloyd, ex Neville IV, 74	- - - - -	7.98
i.	W. Gedney Beatty	- - - - -	7.81

436. Die of 435.

R. META: The inscr. is in dotted letters, possibly indicating the manner of cutting.

a.	Berlin - - - - -	7.56
b.	Hunterian 9 - - - - -	7.76
c.	Sir C. W. C. Oman - - - - -	—
d.	Strozzi 1004 - - - - -	7.50

437. Similar to 435—the border is dotted and the sphendone shows only five stars. The necklace is of beads.

R. :META At the r. an erect murex shell (Aporrhais).

a.	Berlin, ex Prokesch-Östen- - - - -	7.57
b.	Berlin, ex Löbbecke - - - - -	7.79
c.	Br. Mus. Cat. 71- - - - -	7.97
d.	Paris, De Luynes 504 - - - - -	7.67
e.	Boston-Regling—Warren 81, ex Bunbury 124 - - - - -	7.69
f.	Vienna - - - - -	7.30
g.	New York, Metropolitan Mus., Ward 57 - - - - -	7.81
h.	Hunterian 10 - - - - -	7.28
i.	Cambridge, Corpus Cristi—Lewes Coll. - - - - -	—
j.	E. T. Newell - - - - -	7.46
k.	R. Jameson 289 - - - - -	7.76
l.	Bement 190, ex Rhousopoulos 143, and Hirsch XX, 50- - - - -	7.95
m.	Baron Pennisi di Floristella - - - - -	—
p.	Bachelor, Sotheby, 1907, 75 - - - - -	7.58
n.	G. Empedocles, Athens - - - - -	6.90
o.	G. Empedocles - - - - -	7.00
p.	E. P. Robinson, Newport - - - - -	7.52
q.	Hirsch XIV, 87 - - - - -	7.75
r.	Hirsch XXVI, 241 - - - - -	7.74
s.	Seabey II, 97 - - - - -	—

# 100 THE COINAGE OF

**438.** Similar to 437, but larger in scale and of coarser style. Plated?

**R.** Similar to 437, but with murex diagonally to l. and inscr. more extended.

- a. Count Chandon de Briailles, ex Naville  
V, 453 and Ratto, 1912, 251 and  
Nervegna 467 - - - - - 5.05
- b. Helbing Sale, 10/24/27, 2548, ex  
Naville XII, 415 - - - - - 6.14

**439.** Female head (Kore) to r., with a single ear of barley in the hair above the forehead. One leaf of the stem is above the ear while the other extends in a graceful curve to the back of the head. The hair falls in thick tresses. A bead necklace is worn, but no earring. Behind the head is a single grain of barley. On the tranche the letters API appear. The linear circle enclosing the whole is frequently off-flan.

**R.** :ΜΕΤΑΠΙΟΝ On the l. of the ear, a locust, head upward.

- a. Paris - - - - - 7.90
- b. Br. Mus. Cat. 83- - - - - 7.72
- c. Berlin, ex Löbbecke- - - - - 6.85
- d. Naples, Fiorelli 2361 - - - - - —
- e. The Hague - - - - - 6.95
- f. Munich - - - - - —
- g. E. T. Newell - - - - - 7.37
- h. R. Jameson, 324- - - - - 7.64
- i. A. H. Lloyd - - - - - 7.54
- j. Naville XII, 405- - - - - 7.49
- k. Hamburger Sale, June 12, 1930, 571 - - 7.62

440. Die of 439.

R. :METĀ Ear with twisted leaf to l.; the  
inscr. is in large letters.

a.	Brussels, De Hirsch	-	-	-	-	-	-	7.77
b.	Berlin, ex Prokesch-Östen	-	-	-	-	-	-	7.95
c.	Vienna	-	-	-	-	-	-	7.65
d.	Copenhagen	-	-	-	-	-	-	7.30
e.	Cambridge, McClean 942	-	-	-	-	-	-	7.85
f.	A. H. Lloyd	-	-	-	-	-	-	7.96

441. Die of 439.

R. :METĀ Similar to 440, but the leaf differs  
and the inscr. is smaller.

a.	W. Gedney Beatty	-	-	-	-	-	-	7.85
b.	Morgan Memorial, Hartford	-	-	-	-	-	-	—
c.	Commerce	-	-	-	-	-	-	—

442. Die of 439.

R. :MET The outermost awn on the l. has the  
barbs on its outer edge.

a.	Munich	-	-	-	-	-	-	—
----	--------	---	---	---	---	---	---	---

443. Die of 439.

R. METĀ: Leaf to r.

a.	Paris, De Luynes 496	-	-	-	-	-	-	7.72
b.	Seabey I, 533a, ex Ratto, 1/25/26, 478	-	-	-	-	-	-	7.75
c.	Commerce	-	-	-	-	-	-	—

444. Die of 439.

R. :METV—the last letter inverted.

a.	Sir H. Weber, 770	-	-	-	-	-	-	7.58
b.	Br. Mus. Cat. 84-	-	-	-	-	-	-	6.28
c.	Berlin, ex Imhoof-Blumer	-	-	-	-	-	-	7.66

d.	E. T. Newell - - - - -	7.78
e.	R. Cyril Lockett, ex Strozzi 1002, and Maddalena 350 - - - - -	7.78
f.	G. Empedocles, ex Hirsch XXVI, 22 -	7.91
g.	Hirsch XV, 558 - - - - -	7.77
h.	Hirsch XVI, 96 - - - - -	7.50

**445. Die of 439.**

R.  $\overline{\text{METAΠO}}$ : In field to r. a crane facing r.

a.	R. Jameson, 325, ex Strozzi 1003 - -	7.94
b.	Berlin, ex Imhoof-Blumer - - - -	7.54
c.	Cambridge, McClean 941 - - - -	7.89
d.	Munich- - - - -	—
e.	Vienna - - - - -	6.40
f.	The Hermitage - - - - -	—
g.	Egger XL, 163 - - - - -	7.53

**446.** In a linear circle, female head (Kore?) to r., wearing an earring and necklace with pendant, and tiny knot or loop at the back. The hair is held by a figured sphendone.

R. Die of 420–421, with the breaks further developed and the letters YΛ added between the leaf and the ear.

a.	R. Jameson, 285, ex Consul Weber {	7.26
	Sale, 357—wt. given - - - - -	8.22
b.	A. H. Lloyd - - - - -	7.86

**447. Die of 446.**

R.  $\overline{\text{TA}}:\overline{\text{ME}}$  Six-grained barley ear with coarse barbs.

a.	A. H. Lloyd, ex Sir H. Weber, 760, and Martinetti-Nervegna, 465 - - - -	7.61
b.	Hunterian 11 - - - - -	7.60
c.	E. T. Newell - - - - -	7.33

- d. Hirsch XXXI, 48, ex American Artist Sale, 67 and Well-known Amateur 152, Regling-Warren 82- - - - - 7.90
- e. Naville XII, 414- - - - - 7.61
- f. Sambon-Canessa, 1927, 313 - - - - 7.60

**448. Die of 446.**

R. METĀ Leaf to l. with ΛY in the terminal curve.

- a. E. T. Newell - - - - - 7.42
- b. Br. Mus. Cat 70- - - - - 8.07
- c. Berlin - - - - - 7.52
- d. Vienna - - - - - 7.63
- e. Egger XLV, 173- - - - - 7.52

**449. ΣΩTHPIA.** Female head facing three-quarters to r., with flowing locks and a wreath of barley, an ear of which extends on either side. The inscr. is above the head. The necklace is composed of disproportionately large pendants.

R. METĀ: Six-grained barley ear with leaf to right.

- a. Florence - - - - - —
- b. Taranto (ex Carosino Hoard) - - - 7.48
- c. Br. Mus. Cat. 144 - - - - - 7.83
- d. Br. Mus. Cat. 145 - - - - - 7.86
- e. Paris, De Luynes 505 - - - - - 7.47
- f. Berlin, ex Peytrignet - - - - - 7.36
- g. Berlin, " Löbbecke - - - - - 7.50
- h. Berlin, " Imhoof-Blumer- - - - - 7.36
- i. Vienna - - - - - 7.17
- j. Cambridge, McClean 937, ex Strozzi 1025, and Sambon-Canessa, 1907, 370 - - - - - 7.35
- k. Cambridge, McClean 938 - - - - - 7.51

l.	Cambridge, Corpus-Christi, Lewes	
	Coll. - - - - -	—
m.	Naples, Fiorelli 2354 - - - - -	—
n.	Munich- - - - -	—
o.	R. Jameson, 326 - - - - -	7.53
p.	E. T. Newell, ex Hirsch XXVI, 276 -	7.69

450. Female head to l. The hair is bound by a diadem ornamented with a wreath of olive leaves, the foremost of which projects over the forehead. The ends of the diadem hang from a bow at the back. In front of the forehead, and reading upward, NIKA. Beneath the chin, the letter Σ. Cf. pp. 28.

R. METĀ: Curved leaf to r.; seven-grained barley ear.

a.	Vienna - - - - -	7.84
b.	Br. Mus. Cat. 136 - - - - -	7.98
c.	Paris - - - - -	7.50
d.	Berlin, ex Löbbecke - - - - -	7.79
e.	Cambridge, McClean 933 - - - - -	6.63
f.	Winterthur - - - - -	7.75
g.	R. Jameson, 279 - - - - -	7.89
h.	E. T. Newell, ex Hirsch XXXI, 49 - -	7.78
i.	G. Empedocles, ex Hirsch XXVI, 228 - - - - -	7.95
j.	Bement 170, ex Hirsch XXXIV, 44 -	7.85
k.	Sambon (Picard), 143 - - - - -	—

451. Die of 450—the sinking-in of the die has extended still further. In specimen a., the defect has almost surrounded the ear, which accounts for the statement of M. Jameson's catalogue that the piece is 'countermarked' over the ear. One of the Berlin pieces is struck from the recut die—cf. 452.

R.  $\overline{\text{METAΠO}}$  Leaf to l.; in the curve, a locust to r., head upwards.

- |    |   |   |   |   |   |   |   |   |      |
|----|---|---|---|---|---|---|---|---|------|
| a. | R. Jameson, 295                           | - | - | - | - | - | - | - | 7.87 |
| b. | Br. Mus. Cat. 137                         | - | - | - | - | - | - | - | 7.65 |
| c. | Berlin, ex Imhoof-Blumer                  | - | - | - | - | - | - | - | 7.73 |
| d. | Berlin, ex Löbbecke (no trace of plating) | - | - | - | - | - | - | - | 6.46 |

452. Die of 450, recut. In an effort to eliminate the die-defects, there has been a complete re-working below the diadem. The profile is in much higher relief and the expression entirely changed.

R.  $\overline{\text{METABO}}$ : Seven-grained ear in higher relief than 449 and 450; the barbs of the awns are less regular, also. The letters BO are not in line with the remainder of the inscr.

- |    |                        |   |   |   |   |   |   |   |      |
|----|------------------------|---|---|---|---|---|---|---|------|
| a. | Br. Mus. Cat. 138      | - | - | - | - | - | - | - | 7.80 |
| b. | Berlin                 | - | - | - | - | - | - | - | 7.86 |
| c. | Cambridge, McClean 932 | - | - | - | - | - | - | - | 7.74 |

453. Head of Dionysus to l. with hair falling in tresses, and wearing a broad diadem decorated with a meander pattern and with a row of ivy leaves above. Behind the head a loop and one end of the diadem show. Beneath the chin, the letter E.

R.  $\overline{\text{METAII}}$ : Ear in high relief, the awns nearly parallel; the leaf is to r.

- |    |                |   |   |   |   |   |   |   |      |
|----|----------------|---|---|---|---|---|---|---|------|
| a. | A. H. Lloyd    | - | - | - | - | - | - | - | 7.92 |
| b. | Paris          | - | - | - | - | - | - | - | 7.78 |
| c. | Berlin         | - | - | - | - | - | - | - | 7.89 |
| d. | Berlin, ex Fox | - | - | - | - | - | - | - | 7.74 |
| e. | Boston         | - | - | - | - | - | - | - | 7.59 |



f.	Copenhagen	-	-	-	-	-	-	-	-	7.21
g.	E. T. Newell	-	-	-	-	-	-	-	-	7.66
h.	O'Hagan, 52, ex Balmano	-	-	-	-	-	-	-	-	7.51
i.	Sambon Sale, 1925, 109	-	-	-	-	-	-	-	-	—

#### 454. Die of 453.

##### R. :META Leaf to l.

a.	Berlin	-	-	-	-	-	-	-	-	7.56
b.	Br. Mus. Cat. 91-	-	-	-	-	-	-	-	-	8.08
c.	Paris	-	-	-	-	-	-	-	-	7.75
d.	Vienna	-	-	-	-	-	-	-	-	6.23
e.	Munich-	-	-	-	-	-	-	-	-	—
f.	Copenhagen	-	-	-	-	-	-	-	-	7.51
g.	Gotha	-	-	-	-	-	-	-	-	—
h.	R. Cyril Lockett, ex Bement 174	-	-	-	-	-	-	-	-	6.50
i.	De Sartiges 38	-	-	-	-	-	-	-	-	—
j.	Headlam 234, ex Rollin-Feuardent, 1908, 55, and Hirsch XV (Philipsen), 563 and Hirsch VIII, 792	-	-	-	-	-	-	-	-	7.72

455. Variant of 453—the head is larger and the relief not so high. Below the head, the letters ΣΠ.

R. META̐: Seven-grained ear with barbs at right angles to awns. Leaf to r.

a.	Paris, De Luynes 477	-	-	-	-	-	-	-	-	7.69
b.	Berlin, ex Löbbecke	-	-	-	-	-	-	-	-	7.57
c.	R. Jameson 296	-	-	-	-	-	-	-	-	7.96
d.	Hirsch VIII, 791, ex Montagu, 1896, 44-	-	-	-	-	-	-	-	-	7.84

#### 456. Die of 455.

R. META̐: Tapering, seven-grained ear with leaf to r. The awns without barbs, the inscr. curved.

a.	E. T. Newell, ex Hirsch XXX, 185	-	-	-	-	-	-	-	-	7.82
b.	Br. Mus. Cat. 92-	-	-	-	-	-	-	-	-	7.84
c.	Naville XV, 151	-	-	-	-	-	-	-	-	7.95

457. Similar to 455—possibly a barbaric imitation.

R. METAII: Six-grained barley ear; the awns spread and without barbs—possibly a crude copying of 453.

a. E. T. Newell - - - - - 7.61

458. Die of 455.

R. META: Six-grained ear with leaf to r. The awns are widely separated.

a. Spink's Numismatic Circular 53401c,  
ex Hirsch XXI, 359 - - - - - 7.90  
b. Vienna - - - - - 7.62  
c. Hirsch XXX, 184 - - - - - 7.80  
d. Naville XII, 407 - - - - - 7.60

459. Die of 455.

R. :META Six-grained ear with leaf to l.

a. Hirsch XXVI, 247, ex Strozzi 1007- - 7.90  
b. Cambridge, McClean 943, ex Hirsch  
XIV, 93 and Well-Known Amateur  
154, Regling-Warren 80 - - - - 7.83  
c. Van Belle Sale, 1901, ex Rhousopoulos,  
Hirsch XIII, 147 - - - - - 7.67

460. Head of Pan or 'Panessè' to r., with ivy wreath and a short goat's-horn. On the Berlin specimen ΣΠ is to be read in front of the forehead. Cf. Num. Zeit., 1915, p. 99.

R. :METAION Seven-grained barley ear with leaf to l.

a. Berlin, ex Fox - - - - - 7.84  
b. Br. Mus. Cat. 90 - - - - - 7.69

c.	Cambridge, McClean 936, ex Hirsch XV, 562-	- - - - -	7.26
d.	Vienna - - - - -	- - - - -	7.62
e.	Hermitage - - - - -	- - - - -	—
f.	R. Jameson 1866, ex Hirsch XXVI, 24-	- - - - -	7.68

**461.** Laureated head of Apollo (?) to r. On the neck-base, ΑΠΟΛ. Beneath, Σ.

R. META: Broad, six-grained barley ear; leaf to r. The E of the inscr. is taller than its neighboring letters.

a.	Berlin, ex Fox - - - - -	7.81
b.	Berlin, ex Imhoof-Blumer - - - - -	7.63
c.	The American Numismatic Society (Illustr.)- - - - -	7.65
d.	Paris - - - - -	7.85
e.	Paris - - - - -	7.90
f.	Vienna - - - - -	7.45
g.	Vienna - - - - -	6.62
h.	Brussels, De Hirsch - - - - -	8.13
i.	Hunterian 20 - - - - -	7.91
j.	Munich- - - - -	—
k.	Lyons Cabinet - - - - -	7.70
l.	Hungarian National Museum - - - - -	7.63
m.	R. Jameson, 300- - - - -	7.57
n.	E. T. Newell - - - - -	7.72
o.	R. Cyril Lockett, ex Bement 173 and Hirsch XXVI, 249 - - - - -	7.69
p.	E. S. G. Robinson - - - - -	—
q.	Naville X, 73, ex Pozzi, 172 - - - - -	7.77
r.	Hirsch XXVI, 23, ex Löbbecke - - - - -	7.63
s.	Samson-Canessa, 1927, 316 - - - - -	7.90
t.	Samson (Picard), 1923, 138 - - - - -	—
u.	Seabey I, 532 - - - - -	8.05

**462.** Variant of 461—the inscr., much blurred, is sometimes read ΓΑΡ; the Σ in higher relief.

R. META: Thin, six-grained barley ear—the awns unequally spread. Leaf to r.

a.	Berlin, ex Imhoof-Blumer	-	-	-	-	7.42
b.	Br. Mus. Cat. 95	-	-	-	-	7.71
c.	Cambridge, McClean 935	-	-	-	-	7.55
d.	Munich	-	-	-	-	—
e.	Copenhagen	-	-	-	-	7.63
f.	E. T. Newell, ex Stiavelli 73 and Merz- bacher, 1909, 2250	-	-	-	-	7.71
g.	Naville V, 461	-	-	-	-	6.73
h.	E. T. Newell	-	-	-	-	7.49

463. Die of 462.

R. :META Broad, seven-grained barley ear with leaf to l.

a.	Berlin, ex Fox	-	-	-	-	7.71
b.	Br. Mus. Cat. 94	-	-	-	-	7.81
c.	Vienna	-	-	-	-	7.02
d.	Munich	-	-	-	-	—
e.	De Sartiges 40, ex Hirsch XXVI, 248	-	-	-	-	7.70
f.	Hoyt Miller	-	-	-	-	7.48
g.	W. H. Woodward 20, ex Mathey	-	-	-	-	8.02
h.	Strozzi 1015	-	-	-	-	—

464. In a circle of large dots, youthful Dionysiae head to r., wearing a wreath of ivy leaves. Along the base of the neck, ΠΟΛΥ—behind the head, Σ.

R. :META Six-grained barley ear with a short leaf to l.; above it, an owl alighting.

a.	Br. Mus. Cat 93	-	-	-	-	8.02
b.	Berlin	-	-	-	-	7.58
c.	Berlin, ex Imhoof-Blumer	-	-	-	-	7.65
d.	Vienna	-	-	-	-	7.79
e.	Munich	-	-	-	-	—
f.	E. T. Newell	-	-	-	-	7.44

g.	R. Cyril Lockett, ex Pozzi 171	- - -	7.43
h.	S. P. Noe	- - - - -	7.41
i.	Rollin & Feuarent Sale, 1908, 54,		
	ex Hirsch XV, 564	- - - - -	7.77
j.	Ex Berlin Dupl.	- - - - -	7.20

#### 465. Die of 464.

R. MET: Six-grained barley ear; a very slightly curved leaf to l. In field at r., a soldier-ant (?)—Dr. Macdonald says 'possibly a spider or ant.' In most specimens the die is badly broken to r.

a.	Berlin, ex Gansauge-	- - - - -	7.98
b.	Paris	- - - - -	7.90
c.	Paris, De Luynes 493	- - - - -	7.51
d.	Hunterian 45	- - - - -	7.30
e.	Hunterian 46	- - - - -	7.49
f.	Weimar—Goethe Coll.	- - - - -	—

#### 466. Die of 464.

R. :METĀ Curved leaf to l.—above it, an ivy leaf.

a.	Berlin, ex Prokesch-Osten	- - - - -	7.84
b.	Berlin, ex Imhoof-Blumer	- - - - -	7.62
c.	Brussels, De Hirsch	- - - - -	7.96
d.	E. T. Newell, ex Hamburger, 5/29/29,		
	49	- - - - -	7.35
e.	Naville VI, 172, Bement, ex Sir. H.		
	Weber 762	- - - - -	7.70
f.	Well-known Archeologist, 1898, 13	- -	7.32

467. Female head to l. with necklace of pearls but no ear-ring. The hair is bound by a wide fillet which encircles the head giving the effect of a sphendone.

A tiny ear of barley hangs down over the forehead, and a small leaf curves upward from the front of the sphendone—cf. Nos. 470 and 471. In field to r., a poppyhead with leaf. Beneath the neck, TPO, the first letter possibly a II or Γ.

R. Barley ear with leaf to l.—above it, a laurel-leaf.

a.	Br. Mus. Cat. 119	- - - - -	7.91
b.	Berlin, ex Imhoof-Blumer	- - - - -	7.48
c.	Munich	- - - - -	—
d.	Naville V, 458, ex Br. Mus. Cat. 120	- - - - -	7.81

468. Die of 467.

R. METAIIO: Barley ear with leaf to r.; above leaf, a large ant.

a.	R. Jameson, 278-	- - - - -	7.83
b.	Brussels, De Hirsch	- - - - -	8.03
c.	Dresden	- - - - -	7.45
d.	W. Gedney Beatty, ex Naville XII,	- - - - -	
f.	416, and Merzbacher 1909, 2242	- - - - -	7.49
e.	Sir A. Evans	- - - - -	

469. Die of 467.

R. MET: The E and T widely separated. Six-grained ear, with barbs on outer edges of the awns. Leaf to r.; above it, an owl facing to r.

a.	J. P. Morgan Coll., ex Strozzi 996	- - - - -	7.82
b.	Paris	- - - - -	7.80
c.	E. T. Newell	- - - - -	7.28
d.	Hoyt Miller	- - - - -	7.39
e.	A. H. Lloyd, ex Stiavelli 78 and Hirsch	- - - - -	
	XIV, 99	- - - - -	7.63

**470. Die of 467.**

R. METAPONTI: In field to r. a branch of grapevine with a large leaf and a grape cluster, above which a tendril curves back along the outermost awn.

a.	Naples, Santangelo - - - - -	—
b.	Naples, Stevens Coll. - - - - -	—
c.	Athens - - - - -	7.55
d.	Vienna - - - - -	7.26
e.	Munich- - - - -	—
f.	Cambridge, McClean 972 - - - - -	6.29
g.	E. T. Newell, ex Strozzi 995 and Sambon-Canessa, 1907, 32 and Hirsch XXIX, 48 - - - - -	7.72
h.	R. Cyril Lockett, ex Hirsch XXI, (Consul Weber), 360 - - - - -	7.61

**471. Die of 467.**

R. METAIIO: Similar to 470—the symbol smaller in all its details—the tendril forms a loop and continues upward. The barbs on the outer edge of the awns.

a.	Br. Museum - - - - -	—
b.	Berlin, ex Löbbecke- - - - -	7.71
c.	Naples, Fiorelli 2362 - - - - -	—
d.	Cambridge, Corpus Christi-Lewes Coll. - - - - -	—
e.	E. T. Newell - - - - -	7.80
f.	A. H. Lloyd Cf. Num. Chron. 1924, Pl. X, 11- - - - -	7.67

**472.** Female head to l., wearing necklace. The hair is in a thick braid which encircles the head, and is doubled over the forehead—cf. 475 and 476. Behind the head ΣΤ.

R.  $\overline{\text{MET}}$ : Six-grained barley ear; leaf to r.—  
upon it, a mouse facing to l.

- |    |              |   |   |   |   |   |   |   |   |      |
|----|--------------|---|---|---|---|---|---|---|---|------|
| a. | E. T. Newell | - | - | - | - | - | - | - | - | 7.71 |
| b. | E. T. Newell | - | - | - | - | - | - | - | - | 7.48 |

**473.** Female head to r. encircled with a braid of hair not so thick as in 472. In the field above and behind the head AWA, retrograde. Beneath the base of the neck, ΣT—the T is questionable. Imhoof-Blumer (Berl. Bl. f. Munzkunde, 1870, p. 33), suggested that a well preserved specimen would permit the reading A⊙ANA, but the piece owned by Mr. Lloyd shows this very unlikely unless the missing letters are off-flan in front of the forehead—none of the specimens examined are complete for this section of the die except the Naples one, on which all of the letters seem to have been removed by cleaning.

R. Die of 472.

- |    |                    |   |   |   |   |   |   |   |   |                   |
|----|--------------------|---|---|---|---|---|---|---|---|-------------------|
| a. | Berlin             | - | - | - | - | - | - | - | - | 7.80              |
| b. | Naples, Santangelo | - | - | - | - | - | - | - | - | $\overline{7.90}$ |
| c. | E. T. Newell       | - | - | - | - | - | - | - | - | 7.70              |

**474.** Die of 473.

R.  $\overline{\text{MET}}$  Thin, six-grained ear with leaf to l.  
The inscription letters show wide interspacing.

- |    |             |   |   |   |   |   |   |   |   |      |
|----|-------------|---|---|---|---|---|---|---|---|------|
| a. | Vienna      | - | - | - | - | - | - | - | - | 7.90 |
| b. | A. H. Lloyd | - | - | - | - | - | - | - | - | 6.99 |

**475.** Die of 472.

R. Die of 474.

- |    |                          |   |   |   |   |   |   |   |   |      |
|----|--------------------------|---|---|---|---|---|---|---|---|------|
| a. | Br. Mus. Cat. 140        | - | - | - | - | - | - | - | - | 7.48 |
| b. | Berlin, ex Imhoof-Blumer | - | - | - | - | - | - | - | - | 7.60 |
| c. | Vienna                   | - | - | - | - | - | - | - | - | 7.64 |



d.	R. Jameson 291 - - - - -	7.99
e.	A. H. Lloyd, ex Naville V, 459 and Hirsch XXX, 187- - - - -	7.86
f.	A. H. Lloyd, ex Hirsch XXXIII, 162 and Hirsch XXX, 188 and Strozzi 1012 - - - - -	7.95
g.	Helbing, Nov. 1928, 3367, ex Naville IV, 77 and Hirsch XXVI, 274 - -	7.60
h.	Sambon (Picard), 144 - - - - -	—

476. Die of 472 and 475, deepened by recutting.

R. METABO: Above the curve leaf to r., an indefinite symbol, possibly affected by a die-break. To the left of the inscr., a straight line.

a.	Vienna Cf. Imhoof-Blumer, Nymphen, etc. Pl. I, 22 and Sambon, Riv. It. Num., 1889, 143 - - - - -	7.74
b.	De Sartiges, 41 - - - - -	—
c.	Sir H. Weber, 777 - - - - -	6.88

477. Female head to r., of the same type as 446-448, but with ovoid earring with terminal globule replacing leech-shaped one. Beneath the sphendone, in tiny letters, ΟΔΥΛ, the last letter lying just above the clasp or loop of the necklace. Probably a recutting of the die of 446.

R. META: Leaf to r. Lean barley ear; the letters of inscr. large.

a.	Berlin - - - - -	7.90
b.	Br. Mus. Cat. 69 - - - - -	7.79
c.	Paris - - - - -	7.35
d.	A. H. Lloyd, ex Hirsch XXVI, 230 Cf. Proceedings Royal Num. Soc. 1914, p. 20 - - - - -	7.64
e.	Hoyt Miller - - - - -	—

**478. Die of 477.**

R. :METAIIO Leaf to l.; beneath, in the curve, locust, head upward. Barley ear of eight grains.

- |    |  |      |
|----|--|------|
| a. | Naville X, 72, ex Pozzi 175 and Hirsch |      |
|    | XV, 553 - - - - -                      | 6.93 |
| b. | Berlin, ex Löbbecke (Plate 35) - - -   | 7.64 |
| c. | Cambridge, McClean 959 - - - - -       | 7.45 |
| d. | E. T. Newell - - - - -                 | 7.60 |
| e. | Count Chandon de Briailles, ex Hirsch  |      |
|    | XXX, 181 - - - - -                     | 7.70 |
| f. | Hirsch XIV, 85 (86 on plate) - - -     | 6.92 |

**479. Die of 477.**

R. :METAIION Leaf to l. with palmette above.

- |    |                                     |      |
|----|-------------------------------------|------|
| a. | Berlin - - - - -                    | 7.86 |
| b. | Naples, Fiorelli 2358 - - - - -     | —    |
| c. | R. Cyril Lockett, ex Hirsch XXXIII, |      |
|    | 145 - - - - -                       | 7.55 |

**480. Female head to r. in border of dots.** The hair is bound by a fillet which encircles the head four times, leaving a top-knot of loose locks at the back. The earring has a single pendant in the shape of an inverted pyramid. The head is noticeably small in scale.

R. Die of 479—die-break across the ear in many specimens.

- |    |                                  |      |
|----|----------------------------------|------|
| a. | Paris, De Luynes 491 - - - - -   | 7.60 |
| b. | Paris - - - - -                  | 7.40 |
| c. | Br. Mus. Cat. 86 - - - - -       | 7.76 |
| d. | Berlin - - - - -                 | 7.96 |
| e. | Vienna - - - - -                 | 7.77 |
| f. | Cambridge, McClean 976 - - - - - | 7.50 |
| g. | Cambridge, Corpus Christi-Lewes  |      |
|    | Coll. - - - - -                  | —    |

h.	W. Gedney Beatty	-	-	-	-	-	-	-	-	—
i.	Hirsch XXI, 358	-	-	-	-	-	-	-	-	7.99
j.	Hirsch XXVI, 243	-	-	-	-	-	-	-	-	7.77
k.	Egger XLV, 148	-	-	-	-	-	-	-	-	7.63

**481. Die of 480.**

R. METAIIONTION: Leaf to r. with conventionalized lily (lotus?) above it.

a.	Vienna	-	-	-	-	-	-	-	-	7.59
b.	Berlin	-	-	-	-	-	-	-	-	7.57
c.	Turin—Royal Coll. 17972	-	-	-	-	-	-	-	-	7.60
d.	Naples, Fiorelli 2357	-	-	-	-	-	-	-	-	—
e.	Copenhagen	-	-	-	-	-	-	-	-	7.78
f.	Florence	-	-	-	-	-	-	-	-	—
g.	Br. Mus. Cat. 87-	-	-	-	-	-	-	-	-	7.64
h.	Munich	-	-	-	-	-	-	-	-	—
i.	R. Jameson 287	-	-	-	-	-	-	-	-	7.71
j.	E. T. Newell	-	-	-	-	-	-	-	-	7.69
k.	E. T. Newell	-	-	-	-	-	-	-	-	7.60
l.	A. H. Lloyd	-	-	-	-	-	-	-	-	7.65
m.	Hoyt Miller	-	-	-	-	-	-	-	-	7.64
n.	Ratto Sale, 1927, 208	-	-	-	-	-	-	-	-	7.25
o.	Ready Sale 70, ex Hess 1902, 306—									
	ex Coll. Fox	-	-	-	-	-	-	-	-	—

**482.** Similar to 480, but with globular earring and with fillet showing as a double line. Possibly 480 recut.

R. Die of 481.

a.	Munich	-	-	-	-	-	-	-	-	—
----	--------	---	---	---	---	---	---	---	---	---

**483. Die of 482.**

R. METAI: Leaf to r.—above it ΛΥ.

a.	E. T. Newell	-	-	-	-	-	-	-	-	7.94
b.	The American Numismatic Society-	-	-	-	-	-	-	-	-	7.55
c.	Berlin	-	-	-	-	-	-	-	-	7.53
d.	Oxford-Bodleian	-	-	-	-	-	-	-	-	—
e.	Munich-	-	-	-	-	-	-	-	-	—
f.	Naville XII, 420	-	-	-	-	-	-	-	-	7.08

**484. Die of 482.**

R. METĀ: Leaf to r.—above it a quince (?) or the same fruit that serves as the type for Melos.

a.	E. T. Newell, ex Hirsch XXXIII,	
	144 - - - - -	7.70
b.	Br. Mus. - - - - -	7.28
c.	Berlin - - - - -	7.67
d.	Lyons - - - - -	7.50
e.	W. Gedney Beatty - - - - -	—
f.	G. Locker Lampson Cat. 21 - - - - -	7.63

**485. Die of 482.**

R. METAIION: Leaf to r.—above it a palmette.

a.	Taranto, ex Carosino Find - - - - -	7.71
b.	Spink's Numismatic Circular 53399- - - - -	7.78

**486. Female head to r., the head bound with a fillet. The earring is triple pendant; the bead necklace is often obliterated.**

R. Die of 485, considerably worn; the O and N of the inscr. filled in, and flaws elsewhere.

a.	Berlin - - - - -	7.78
b.	E. T. Newell - - - - -	7.59
c.	E. T. Newell - - - - -	7.71
d.	A. H. Lloyd - - - - -	7.21
e.	Spink's Numismatic Circular 53398 - - - - -	7.78

**487. Die of 486.**

R. METAI: In field to r., a pear. A break at the edge of the die, just below the symbol, shows itself in an initial stage in most specimens.

a.	Br. Mus. Cat. 143 - - - - -	7.77
b.	Vienna - - - - -	7.63
c.	The Hague - - - - -	7.85
d.	Cambridge, McClean 967 - - - - -	7.57

e.	Buda Pesth—Hungarian National Museum-	-	-	-	-	-	-	-	-	—
f.	R. Jameson 297	-	-	-	-	-	-	-	-	7.57
g.	Count Chandon de Briailles	-	-	-	-	-	-	-	-	7.30
h.	E. P. Robinson	-	-	-	-	-	-	-	-	7.61
i.	Naville V, 455	-	-	-	-	-	-	-	-	7.50
j.	Egger XLV, 175	-	-	-	-	-	-	-	-	7.57

**488.** Female head to r. with triple-pendant earring and necklace. The head is encircled by a diadem which holds in place a wreath of leaves. On the neck-base, 'NIKA'.

R. Die of 487, with the break considerably enlarged.

a.	Berlin, ex Imhoof-Blumer	-	-	-	-	-	-	-	-	7.49
b.	Berlin, ex Löbbecke	-	-	-	-	-	-	-	-	7.94
c.	Paris, De Luynes 488	-	-	-	-	-	-	-	-	7.70
d.	Copenhagen	-	-	-	-	-	-	-	-	7.40
e.	Count Chandon de Briailles	-	-	-	-	-	-	-	-	7.35
f.	G. Empedocles	-	-	-	-	-	-	-	-	7.30
g.	Durufle, 1910, 72	-	-	-	-	-	-	-	-	—
h.	Hirsch XVI, 99	-	-	-	-	-	-	-	-	7.55
i.	Naville V, 460	-	-	-	-	-	-	-	-	7.73

**489.** An imitation of 488. The inscription is absent and the modelling very feeble.

R. METAII. At the r., a pear. The awns, with their crude barbs, are poorly cut.

a.	R. Jameson 303	-	-	-	-	-	-	-	-	7.70
b.	A. H. Lloyd	-	-	-	-	-	-	-	-	7.76

**490.** Die of 488.

R. META: Leaf to r.—above, a pomegranate (?).

a.	Cambridge, McClean 991, ex Mad-									
	dalena 377	-	-	-	-	-	-	-	-	7.70
b.	Naples, Fiorelli 2409	-	-	-	-	-	-	-	-	—

**491.** Female head to r., with small triple-pendant earring. The hair at the back is bound by a net.

R. Die of 490.

a.	Taranto, ex Carosino Hoard	-	-	-	-	7.61
b.	Berlin	-	-	-	-	7.81
c.	Munich	-	-	-	-	—
d.	E. T. Newell	-	-	-	-	7.31
e.	R. Jameson 288	-	-	-	-	7.22

**492.** Die of 491.

R. METAII: Leaf to r.; above it, a scallop shell.

a.	E. T. Newell	-	-	-	-	7.74
b.	Baron S. Pennisi de Floristella, Acireale	-	-	-	-	—
c.	Cahn 66, 44, ex Cahn Sale 60, 83	-	-	-	-	7.57

**493.** Female head to r., with single pendant earring, and hair bound by a sphendone or sakkos.

R. Die of 492.

a.	Hoyt Miller	-	-	-	-	—
b.	Taranto, ex Carosino Hoard	-	-	-	-	7.91
c.	Dresden	-	-	-	-	—
d.	E. T. Newell	-	-	-	-	7.82
e.	R. Jameson 282	-	-	-	-	7.76
f.	W. H. Woodward 21, ex Collignon 31 and Maddalena 355	-	-	-	-	7.98
g.	G. Locker Lampson Cat., ex Nervegna 466 and Mathey, 31	-	-	-	-	7.75
h.	A. H. Lloyd	-	-	-	-	7.77

**494.** Die of 493.

R. METAIION: Leaf to r.; above it, a laurel leaf.

a.	Br. Mus. Cat. 133	-	-	-	-	7.78
b.	Hunterian 48	-	-	-	-	7.54
c.	Berlin	-	-	-	-	7.62
d.	Cambridge, McClean 966	-	-	-	-	7.41
e.	Vienna	-	-	-	-	7.82
f.	G. Empedocles, ex Hirsch XXVI, 271	-	-	-	-	7.68

**495.** Female head to r., with ampyx and sphendone ornamented with three stars. The necklace suspends an ornament; the earring has a single pendant. In front of the forehead, with the top of the letters adjacent thereto, reading upward, 'NIKA'.

R. ·METAIIONTION· Curved leaf to l.; above it, pomegranate with long stem. The barbs are on the outer edge of the awns.

a.	Berlin - - - - -	7.89
b.	Brussels, De Hirsch - - - - -	7.82
c.	Br. Mus. Cat. 141 - - - - -	7.81
d.	Paris - - - - -	7.60
e.	Paris, De Luynes 489 - - - - -	7.98
f.	Berlin, ex Imhoof-Blumer - - - - -	7.90
g.	Vienna - - - - -	7.64
h.	E. T. Newell - - - - -	7.16
i.	E. P. Robinson - - - - -	7.83
j.	A. H. Lloyd - - - - -	7.89
k.	A. H. Lloyd - - - - -	7.89
l.	Cambridge, Corpus Christi—Lewes Coll.	
m.	Naville V, 491 - - - - -	7.48

**496.** Similar to 491—the head is larger.

R. ·METAII· Leaf to r., above it, ΔY.

a.	E. T. Newell - - - - -	7.27
b.	R. Cyril Lockett, ex Pozzi 178 and Hirsch XXXIII, 160- - - - -	7.75
c.	A. H. Lloyd, ex Naville XIV, 33 - - - - -	7.66
d.	Helbing Sale, 1928, 3365 - - - - -	7.70
e.	Commerce - - - - -	—

**497.** Similar to 493—the head larger. KPI in field to l.

R. Die of 496.

a.	H. A. Greene, Providence - - - - -	—
b.	Berlin - - - - -	7.50

c.	The Hague, Six Coll.	-	-	-	-	-	-	-	7.80
d.	Hunterian 49	-	-	-	-	-	-	-	7.51
e.	Copenhagen	-	-	-	-	-	-	-	7.56
f.	Br. Mus. Cat. 131	-	-	-	-	-	-	-	7.67
g.	R. Jameson 281	-	-	-	-	-	-	-	7.84
h.	Archeologist Sale, (Evans), 15	-	-	-	-	-	-	-	7.39

**498.** Similar to 497—the KPI differently placed.  
A bead necklace shows faintly.

R. Closely similar to 496-7—the base of the ear is in higher relief, and the lambda is slightly broader.  
The Y is off-flan.

a.	Naville IV, 75, ex Sir H. Weber, 773	-	7.42
----	--------------------------------------	---	------

**499.** Die of 497.

R. :METAIIO Nearly straight leaf to l.

a.	Cambridge, McClean 961	-	-	-	-	-	-	-	7.62
b.	Berlin	-	-	-	-	-	-	-	7.31
c.	Paris	-	-	-	-	-	-	-	7.55
d.	Naples, Fiorelli 2359	-	-	-	-	-	-	-	—
e.	Seaby I, 535	-	-	-	-	-	-	-	7.76

**500.** Die of 499.

R. :META Leaf to l. Die broken between the ear and the leaf.

a.	Berlin	-	-	-	-	-	-	-	7.63
b.	Milan	-	-	-	-	-	-	-	—
c.	E. T. Newell	-	-	-	-	-	-	-	7.45
d.	H. A. Greene	-	-	-	-	-	-	-	7.45

**501.** Female head to r. with broad fillet or ampyx, which is visible over the hair-mass at the back.

R. :MET Leaf to l.

a.	Brussels	-	-	-	-	-	-	-	6.69
b.	Br. Mus. Cat. 142	-	-	-	-	-	-	-	7.89
c.	Vienna	-	-	-	-	-	-	-	7.83
d.	Vienna	-	-	-	-	-	-	-	7.46
e.	E. T. Newell	-	-	-	-	-	-	-	7.50



502. Same type as 501—the fillet does not show at the back, and the letters of a signature, possibly KPI, show behind the neck. Probably a re-cutting of the die of 501—note the added relief to the profile, and in the knot of hair at the back, as well as the enlargement of the single-pendant earring.

R. MĒ: Curved leaf to r. Traces of an obliterated M precede the inscr.

- |    |                                 |                |
|----|---------------------------------|----------------|
| a. | A. H. Lloyd, ex Bement 185, and |                |
|    | Hirsch XXXI, 66-                | - - - - - 7.40 |
| b. | Cambridge, McClean 960 -        | - - - - - 7.58 |
| c. | S. P. Noe - - - - -             | - - - - - 7.45 |

503. Female head to r. with single-pendant earring and ampyx. The necklace is held at the back by a tiny circlet apparently suspended from the hair; the pendant is bifurcate. In the field behind the head, ΣΟΑΤ(?). In tiny letters along the base of the neck, ΑΡΙΣΤΙ. The whole is in a linear circle.

R. MĒT: Leaf to r.

- |    |   |      |
|----|---|------|
| a. | Paris, De Luynes 490 - - - - -          | 8.04 |
| b. | Cambridge, McClean 934 - - - - -        | 7.80 |
| c. | Hunterian 17 - - - - -                  | 7.26 |
| d. | E. T. Newell, ex Sotheby, July 6, 1921, |      |
|    | 171 - - - - -                           | 8.03 |

504. Die of 503.

R. :METAIHΘ Seven grained barley ear. Leaf to l.

- |    |                                     |      |
|----|-------------------------------------|------|
| a. | R. Jameson 298, ex Hirsch XV, 556 - | 7.76 |
| b. | Vienna - - - - -                    | 6.65 |
| c. | H. A. Greene - - - - -              | —    |
| d. | Commerce - - - - -                  | —    |

505. Die of 503.

R. META: Compact, seven grained ear. Leaf to r.

- |    |          |   |   |   |   |   |   |   |   |   |      |
|----|----------|---|---|---|---|---|---|---|---|---|------|
| a. | Paris    | - | - | - | - | - | - | - | - | - | 7.90 |
| b. | Commerce | - | - | - | - | - | - | - | - | - | —    |

506. Female head to r. with triple-pendant earring and necklace. The hair is rolled back from the forehead and tucked in at the back. Border of dots. The type is apparently derived from the Euainetos head at Syracuse—possibly through the version used at Terina (cf. Evans—The Artistic Engravers of Terina, Num. Chron. 1912, p. 21.)

R. Die of 505.

- |    |                                     |                |
|----|-------------------------------------|----------------|
| a. | British Museum, ex Sir Herman Weber |                |
|    | 758 and Sambon Sale, 1902, 325      | - - 7.33       |
| b. | E. T. Newell                        | - - - - - 7.75 |

507. Similar to 506 but smaller in scale and not so well done.

R. META: Seven-grained barley ear. Leaf to r., above it,  $\Xi\Omega$ . There is a crescent-shaped die-break across the lower part of the ear, and another flaw at the lower extremity of the T.

- |    |                            |              |
|----|----------------------------|--------------|
| a. | Taranto, ex Carosino Hoard | - - - - 7.87 |
| b. | Berlin, ex Friedlander     | - - - - 7.77 |
| c. | Berlin, ex Löbbbecke       | - - - - 7.76 |

508. A copying of 507, in lower relief. The hair, where it is tucked in at the back is not well done.

R. Die of 507.

- |    |                                    |        |
|----|------------------------------------|--------|
| a. | R. Jameson, 284, ex Hirsch XV, 559 | - 7.45 |
|----|------------------------------------|--------|

509. Die of 507. Cf. also No. 542.

R. Seven-grained barley ear with leaf to r.; above it, vertically upward,  $\Xi\Omega$ .

a.	Br. Mus. Cat. 85	- - - - -	7.98
b.	Florence	- - - - -	—
c.	Naville XV, 174, ex Helbing Sale, Nov. 1928, 3364	- - - - -	7.60

510. Similar to die of 493 or 497-500, but with letter I behind the head.

R. Die of 509.

a.	Cambridge, McClean 963	- - - - -	7.71
b.	Naples, Santangelo	- - - - -	—
c.	Egger XLV, 174	- - - - -	7.68

511. Die of 510.

R.  $\overline{\text{MET}\dot{\text{A}}}$ : Leaf to r.; above it,  $\text{A}\omega$ .

a.	Bement, Naville VI, 186	- - - - -	7.78
b.	E. T. Newell	- - - - -	7.75
c.	Sambron-Canessa, 1927, 314 (7.85), ex Ratto, Jan. 26, 1926, 488	- - - - -	7.66

512. Female head to r. with earring and necklace. The cutting of the hair-net, evidently a reminiscence of preceding dies, is ineffective. In field to l., K.

R.  $\overline{\text{:METAH}\ddot{\text{O}}}$  Leaf to l. The A had a double-stroke cross bar.

a.	British Museum, ex Sir H. Weber 759	- - - - -	7.52
b.	Berlin	- - - - -	6.00
c.	Vienna (over Corinthian stater)	- - - - -	—
d.	Cambridge, McClean 962	- - - - -	7.64
e.	Copenhagen	- - - - -	7.68
f.	E. T. Newell (struck over ?), ex Ratto, 1912, 257	- - - - -	7.69
g.	Hirsch XXVI, 245	- - - - -	7.82
h.	Naville V, 454	- - - - -	7.61

513. Similar to 497-500, but with a retrograde K behind the neck.

- R. :META Leaf to l.; above it, a conical helmet.
- |    |                                    |           |      |
|----|------------------------------------|-----------|------|
| a. | Brussels, De Hirsch                | - - - - - | 7.85 |
| b. | Br. Mus. Cat. 132                  | - - - - - | 7.59 |
| c. | Berlin                             | - - - - - | 7.66 |
| d. | E. T. Newell (over Corinthian?     |           |      |
|    | stater)                            | - - - - - | 7.43 |
| e. | A. H. Lloyd, ex Naville V, 488     | - - -     | 7.80 |
| f. | Naville V, 489, ex R. Payne Knight |           |      |
|    | Coll.                              | - - - - - | 7.39 |

514. Die of 513.

R. META: Eight-grained ear with leaf to r.; above it, an awkward K retrograde.

- |    |              |           |      |
|----|--------------|-----------|------|
| a. | E. T. Newell | - - - - - | 7.72 |
| b. | Berlin       | - - - - - | 7.72 |
| c. | Munich-      | - - - - - | —    |
| d. | Munich-      | - - - - - | —    |

515. Similar to 513, but of finer workmanship.

R. META: Seven-grained ear with leaf to r.; above it, K retrograde.

- |    |                                       |           |      |
|----|---------------------------------------|-----------|------|
| a. | Headlam Sale 232, ex Stiavelli 76 and |           |      |
|    | Well-known Amateur 158 (Regling-      |           |      |
|    | Warren 79)-                           | - - - - - | 8.10 |
| b. | Cleveland Museum (overstruck)-        | - - -     | —    |
| c. | Baron Pennisi di Floristella          | - - -     | —    |
| d. | Cahn 61st sale, 20, ex Nervegna 469   | -         | 7.70 |

516. Female head to r. with single pendant earring and necklace. The head is encircled by a

braid of hair, the ends of which are arranged as a tuft or aigrette at the top.

R. :META Leaf to l.; above it, a poppy-seedpod.

a.	Paris, De Luynes 480	- - - - -	7.77
b.	Bement 187, ex Hirsch XXVI, 275-	- - - - -	7.90
c.	Nervegna 468	- - - - -	—
d.	E. T. Newell	- - - - -	7.25

### 517. Die of 516.

R. META: Seven-grained ear with nearly straight leaf to r.; above it, a retrograde K, slanting upward to l.

a.	E. T. Newell	- - - - -	7.45
b.	Naples, Fiorelli 2408	- - - - -	—
c.	Naples, Santangelo	- - - - -	—
d.	Cambridge, McClean 965	- - - - -	7.95

### 518. Die of 515.

R. MET: Seven-grained barley ear with leaf to r.

a.	Vienna	- - - - -	7.84
b.	Cambridge, McClean 964, ex Hirsch XIII, 150	- - - - -	7.86
c.	Ratto, 1912, 258, ex Naville V, 490-	- - - - -	7.76

519. Female head with earring and necklace, and with hair bound by net, facing to l.

R. METAI: Leaf to r.; above it, an ivy leaf.

a.	Berlin	- - - - -	7.45
b.	Pozzi 179, ex Hirsch XVI, 100	- - - - -	7.87
c.	Commerce	- - - - -	—

520. Die of 519 with break below.

R. METĀ: Leaf to r.; above it, Φ.

- |    |                                   |           |      |
|----|-----------------------------------|-----------|------|
| a. | Br. Mus. Cat. 130                 | - - - - - | 7.93 |
| b. | Cambridge, McClean 968            | - - - - - | 7.31 |
| c. | Hungarian Nat. Museum, Buda Pesth | - - - - - | 7.65 |

521. Female head to l. with earring (single-pendant).

R. Die of 519.

- |    |                        |           |      |
|----|------------------------|-----------|------|
| a. | Cambridge, McClean 969 | - - - - - | 7.68 |
| b. | Athens                 | - - - - - | 7.80 |

522. Die of 521.

R. METAI: Leaf to r.; above it, an ivy leaf.

- |    |                    |           |      |
|----|--------------------|-----------|------|
| a. | Copenhagen         | - - - - - | 7.91 |
| b. | Vienna             | - - - - - | 7.49 |
| c. | Munich             | - - - - - | —    |
| d. | Naples, Santangelo | - - - - - | —    |
| e. | Naples             | - - - - - | —    |
| f. | Naples             | - - - - - | —    |

523. Similar to 521, but smaller in scale and higher in relief.

R. METAIIONTINΩN: Leaf to r.; above it, an ivy leaf.

- |    |                              |           |      |
|----|------------------------------|-----------|------|
| a. | Berlin, ex Löbbecke, fourrée | - - - - - | 6.37 |
|----|------------------------------|-----------|------|

524. Probably same die as 521.

R. METAIIONTINΩN: Leaf to r.; above it, a leaf (in outline, rather than modelled).

- |    |                                      |           |      |
|----|--------------------------------------|-----------|------|
| a. | Paris, De Luynes 476                 | - - - - - | 7.85 |
| b. | Br. Mus. Cat. 128                    | - - - - - | 7.99 |
| c. | R. Jameson 286, ex Prowe Sale, 1904, |           |      |
|    | 98                                   | - - - - - | 7.74 |
| d. | E. T. Newell                         | - - - - - | 7.40 |

e.	George J. Bauer, Rochester	- - - -	—
f.	Hirsch XX, 56, ex Hirsch XIII, 149	-	8.02
g.	Naville XIII, 88, ex Hirsch XXX,		
	180	- - - -	7.98
h.	Ratto, 1/26/26, 487	- - - -	7.52

525. Similar to 524, but the head is smaller.

R. METÀ: Leaf to r. with a murex above.

a.	E. T. Newell, ex Pozzi, 177, and Hirsch		
	XV (Philipsen), 588	- - - -	7.40

526. Die of 525.

R. Die of 525 with a small cartouche bearing the inscr. †HP beneath the murex. This addition seems to have been made to offset a break in the die at this point.

a.	Berlin, ex Hamburger Sale, 10/29/1901,		
	Pl. I, 10	- - - -	7.66
b.	Naples, Santangelo 4140	- - - -	—
c.	A. H. Lloyd	- - - -	7.82

527. Die of 525.

R. METÀ: on a raised cartouche. In field to r., but reading in the opposite direction, †HP.

a.	Brussels	- - - -	7.87
b.	Br. Mus. Cat. 127	- - - -	7.68
c.	Berlin, ex Imhoof-Blumer	- - - -	7.59
d.	Berlin, ex Löbbecke	- - - -	7.94
e.	Copenhagen	- - - -	7.81
f.	E. T. Newell	- - - -	7.40
g.	Cambridge, Corpus Christi, Lewes		
	Coll.	- - - -	—
h.	Hunterian 12	- - - -	7.70
i.	Hunterian 13	- - - -	7.76
j.	The Hermitage	- - - -	—
k.	A. H. Lloyd, ex Bement 189	- - - -	7.86

**528.** Female head to r., with earring (leech-shaped) and necklace.

R. METAPONTIN: on a cartouche with rounded ends to l. of ear. Cf. note by M. Babelon in his Catalogue de la Coll. de Luynes, where the final letter is read H.

a. Paris, De Luynes 492 - - - - - 7.30

**529.** Similar to 528, but smaller in scale and higher in relief.

R. METAPONTINΩ: on a raised cartouche with rounded ends. Seven-grained barley ear with leaf to r.; above it, a conical helmet with hanging chin-strap (?).

a. Br. Mus. Cat. 126 - - - - - 7.86  
 b. Berlin - - - - - 7.30  
 c. Hunterian 47 - - - - - 7.69  
 d. Cambridge, McClean 975 - - - - - 7.52  
 e. R. Cyril Lockett - - - - - 7.81  
 f. Count Chandon de Briailles - - - - - 7.53  
 g. Stiavelli 77 - - - - - 7.85

PLATED COINS

**530.** Imitation of No. 330.

R. Similar to reverse of 332, save that the ethnic has four letters—the prototype has but three.

a. Milan-Castello Sforzesco - - - - - —

**531.** See 532 for descr.—same die.

R. :(M)ETĀ. Seven-grained barley ear—similar to its prototype (Nos. 366–383). The M of the ethnic is off-flan.

a. A. H. Lloyd - - - - - 5.89  
 b. R. Jameson, 330 - - - - - 6.30



**532.** Imitation of the type of Nos. 366–383, with the added inscr. TAEPINON. Cf. Num. Zeit. 1915, p. 100.

R. MET: Short, scrubby, six-grained ear, with widely separated awns and barbs on the inside of the awns. The leaf to the right is not characteristic.

a. R. Jameson, 1870 - - - - - 5.64

**533.** An imitation of No. 450. The modelling is much flatter than in the prototype; the hair is badly done and so is the ear. The ribbon at the back of the head is bungled.

R. MET: With all the weakness of the model which was being copied (No. 450).

a. The Hague - - - - - 6.70

**534.** An imitation of No. 472—the die has a flat field, and lacks the letters behind the neck.

R. The modelling and the lettering are unlike that of the reverses muled with this obverse type. The mouse on the leaf to the right is a little overlarge in scale. The awns are cut by first making holes with the drill and then making the line thus formed continuous—a practice not observed elsewhere in the dies of this period. The ear is well-modelled; the die unusually flat.

a. The Hague—possibly not plated. - - 7.70

**535.** Also similar to 472, but with bolder modelling than in No. 534.

Similar to reverse of 472; the mouse is long-eared.

a. B. M. Cat. 139 - - - - - 6.05

**536.** Same type as Nos. 480—484, but a third die. The locks of hair at the back are longer, the earring differs. See discussion of this type on p. 53.

R. Similar to 481, with differences in the placing and form of the symbol.

- a. Berlin (Von Dressel thought it plated,  
Dr. Regling doubts this) - - - - 6.93
- b. Berlin - - - - - 7.57

**537.** Imitation of Nos. 480—484.

R. METAPONTÓ(?): Tapering, six-grained ear with leaf to r.; symbol, if any, off-flan.

- a. Vienna—plating not certain - - - - 6.59

**538.** An imitation of the type of Nos. 467—471.

R. Imitation of 471.

- a. Paris - - - - - .—

**539.** Imitation of No. 495.

R. Fairly close imitation of 495—the barley ear is not so well-proportioned.

- a. A. H. Lloyd, ex Hirsch XXX, 182 - - 5.38

**540.** Die of 539.

R. Imitation of No. 471, but not the same die as 538.

- a. Vatican Cabinet. Cf. Garrucci ciii 28- -.—

**541.** An imitation of No. 471.

R. Die of No. 540.

- a. A. H. Lloyd, ex Auct. Sambon, Mar.  
13, 1923 (Picard), No. 115 - - - - 7.00

542. A close following of No. 506—the die-cutting lacks the brilliancy of its pattern.

R. METAIIO: Six-grained ear to r., with poppy-head and KAA above it. The ear is in high relief at the base, in low relief at the apex.

a. Brussels (De Hirsch)—“no traces of plating” - - - - - 6.86

543. Similar to 497 to 500 (without KPI).

R. Fairly close imitation of rev. die of Nos. 496-497.

a. Paris - - - - - 6.60

544. Imitation of No. 493.

R. :ME(T) Leaf to l.

a. Berlin—no evidences of plating, ex  
Peytrignet - - - - - 7.16

545. Die of 544.

R. METAIINOTION: (reading not certain)—closely similar to 546.

a. Paris—fourrée - - - - - 6.00

546. Imitation of 521 or 523.

R. METAIIONTION: The cross-bar of the T is lacking.

a. Br. Mus. Cat. 129 - - - - - 7.45

547. Die of 546.

R. Die of 546 with the cross-bar of the T added, and with a leaf, tip downwards, added to the field at the right.

a. Copenhagen - - - - - 6.25

## NOTES

<sup>1</sup> Koldewey and Puchstein, *Die Griechischen Tempeln in Unteritalien und Sicilien*, Berlin, 1899.

<sup>2</sup> Diodorus, XI, 52.

<sup>3</sup> Aristotle, *Polit.*, V, 2, 8.

<sup>4</sup> This difficulty lies in the statement that the allied Rhegians after the defeat fled "toward Rhegium." So great was the impetus of the pursuers "that they rushed into Rhegium together with the fugitives and took possession of the city." Pais believes that the city to which reference is made was a trading post or fortress in the valley of the River Siris granted to their Rhegian allies by the Tarentines.

<sup>5</sup> Pais, *Ancient Italy*, p. 27 ff.

<sup>6</sup> Pais bases his opinion on (1) The absence of any mention of the name of Metapontum in the war between Tarentum and Thurium in 433 over the site for Heracleia; (2) on the omission of Metapontum's name as participating in the council of the Italic League held at Heracleia (Strabo, VI, p. 280C.); (3) on the absence of any mention of Metapontum when the Achaean League was revived, (Polybius, II, 39). I have not found that Pais' conclusions are shared by anyone else. If Tarentum had controlled Metapontum at this time, there would have to be an explanation of why the coinage was allowed to continue.

<sup>7</sup> *Br. Mus. Cat. Italy*, p. 244; Ward, *Greek Coins and their Parent Cities*, p. 10.

<sup>8</sup> *Klio*, VI, pp. 509 and 515.

<sup>9</sup> *Revue Suisse*, XXI, 1917, p. 5, where further references are cited.

<sup>10</sup> *Zeus*, Pt. 1, p. 372.

<sup>11</sup> M. Lacava, *Topogr. e Storia di Metaponto*. Naples, 1891.

<sup>12</sup> M. Vlasto, *Taras Oikistes*, p. 90, etc.

<sup>13</sup> See Selvaggi in *Apulia*, 1910, v. I, p. 58.

<sup>14</sup> *Baranowsky Sale*, 1931, No. 213.

<sup>15</sup> *Ancient Greek Coins in the possession of William Harrison Woodward*, p. 7, No. 20.

<sup>16</sup> *J. I. N.*, 1908, p. 1 ff.

<sup>17</sup> Cf. Sambon, *Rev. Num.*, 1915, p. 85.

<sup>18</sup> *Num. Chron.*, 1920, p. 277.

<sup>19</sup> *Num. Chron.*, 1885, p. 165ff.

<sup>20</sup> M. Vlasto in *Numismatic Chronicle*, 1926, p. 218 ff., where a dating of 336-4 B.C., is assigned.

<sup>21</sup> *Atti e Memorie dell' Istituto Ital. di Num.* vol VI, pp. 1-72.



# METAPONTUM



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311½



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# Plate 24



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# METAPONTUM



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# Plate 25



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# METAPONTUM



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# Plate 25



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# METAPONTUM



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Plate 26



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# METAPONTUM



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Plate 26



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# METAPONTUM



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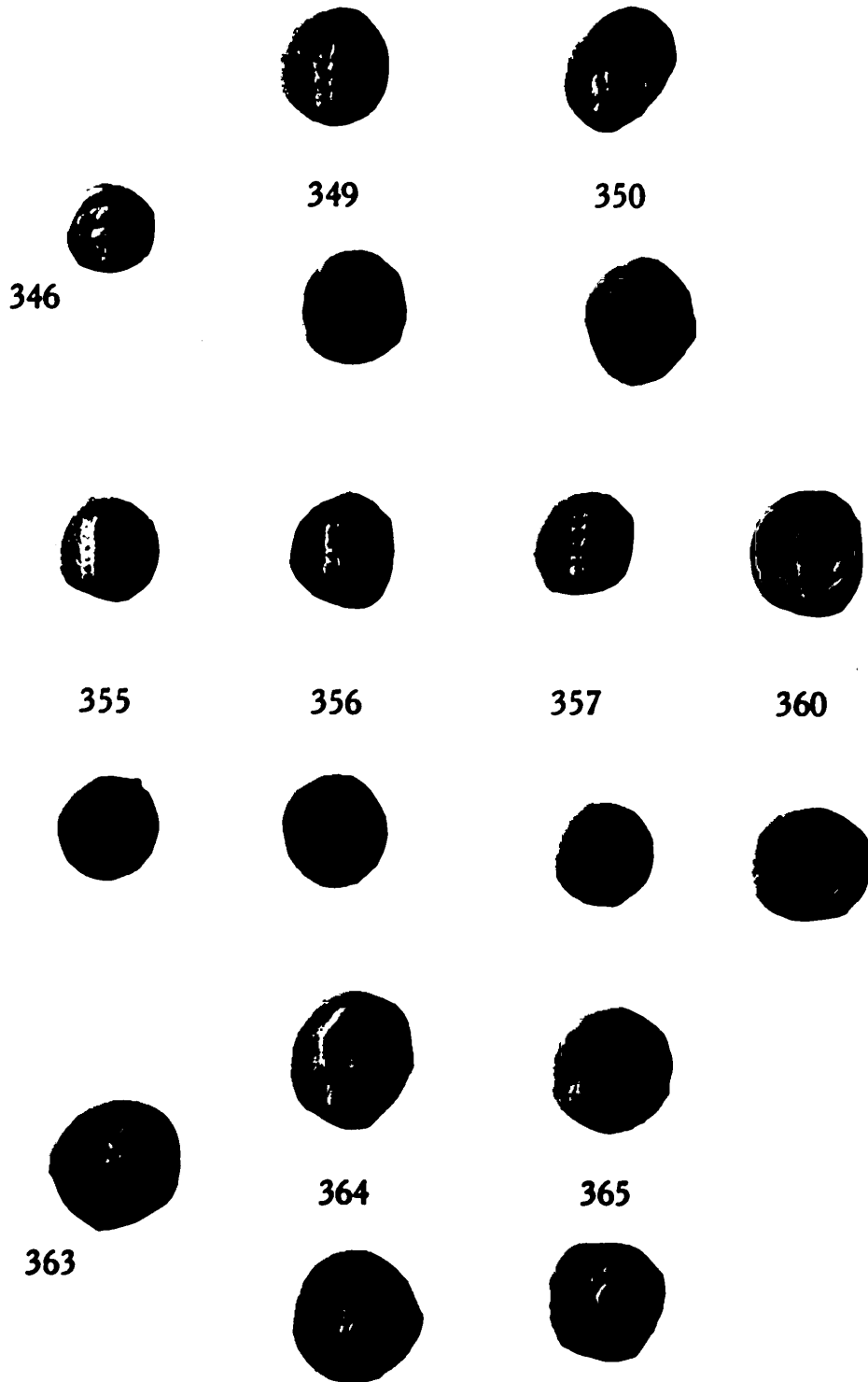


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Plate 27













# METAPONTUM



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Plate 28



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# METAPONTUM



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# Plate 29



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# METAPONTUM



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# Plate 30



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394a



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# METAPONTUM



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# Plate 29



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# METAPONTUM



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# Plate 30



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398a



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# METAPONTUM



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407a



407c



Plate 31



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# METAPONTUM



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# Plate 32



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# METAPONTUM



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# Plate 31



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# METAPONTUM



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Plate 32



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# METAPONTUM



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# Plate 33



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# METAPONTUM



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# Plate 34



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# METAPONTUM



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Plate 33



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# METAPONTUM



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# Plate 34



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# METAPONTUM



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450a



450f

450b



450d



# Plate 35



478b



449a



449b



451a



451c



452







# METAPONTUM



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461a



Plate 36



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457



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461c



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# METAPONTUM



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448



450a



450f

450b



450d



# Plate 35



478b



449a



449b



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451c



452









# METAPONTUM



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461a



Plate 36



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461c



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# METAPONTUM



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# Plate 37



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# METAPONTUM



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Plate 36



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# METAPONTUM



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# Plate 37



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# METAPONTUM



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# Plate 38



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# METAPONTUM



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# Plate 39



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# METAPONTUM



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# Plate 40



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# METAPONTUM



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# Plate 41



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# METAPONTUM



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# Plate 41



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# METAPONTUM



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# Plate 42



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# METAPONTUM



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# Plate 42



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# METAPONTUM



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# Plate 43



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# METAPONTUM



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# Plate 43



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# NUMISMATIC NOTES AND MONOGRAPHS

No. 48



## THE UNITED STATES HALF DIMES

BY

D. W. VALENTINE

THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
NEW YORK  
1931

## PUBLICATIONS

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The American Numismatic Society. Catalogue  
of the International Exhibition of Contempo-  
rary Medals. March, 1910. New and re-  
vised edition. New York. 1911. xxxvi, 412  
pages, 512 illustrations. \$10.00.

# NUMISMATIC NOTES AND MONOGRAPHS



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# THE UNITED STATES HALF DIMES

BY  
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**THE INTELLIGENCER PRINTING CO.**  
**LANCASTER, PA.**

# THE UNITED STATES HALF DIMES

BY D. W. VALENTINE

The initial coin of the series with which this monograph is concerned, has a very strong claim to having been the first official issue of the United States Mint. The evidence for this comes from no less an authority than "the Father of his country." In his fourth annual address, November 6th, 1792, President Washington stated:

"In execution of the authority given by the legislature, measures have been taken for engaging some artists from abroad to aid in the establishment of our Mint. Others have been employed at home. Provisions have been made for the requisite buildings, and these are now putting into proper condition for the purposes of the establishment. There has been a small beginning in the coinage of half dimes, the want of small coins in circulation calling the first attention to them."

In the light of this testimony, we may question the conclusion of Crosby and those who have followed him in classifying the half dime as a pattern coin. Compared with the dime of 1792 which, to judge from the small number of specimens known, never passed beyond the pattern stage, the half dime is common.

There is a tradition that Washington had a further interest in these coins. The metal of which they were struck is said to have been obtained by

melting some of his private plate, and the head on the obverse is thought by some to be the portrait of Martha Washington. The design was probably made and cut by Joseph Wright who died of yellow fever in 1793.

The derivation of the word "Disme" is none too clear. The Oxford Dictionary and Frey are agreed that it comes from the French *Dixieme*. "Disme" was used by Steven de Bruges in the 16th century—that he originated that word is not at all certain. Simon Stevinus was a noted mathematician who practically originated the decimal system. He wrote a seven page pamphlet "La Disme" in 1586. His system was cumbersome but it was the start and it was probably where the term "Disme" was popularized for the tenth part. We do not know how "Disme" was originally pronounced, but the traditional rendering in two syllables with a short I and a long E presents objections which are hard to reconcile with the pronunciation of the French word. If the word was pronounced in *one* syllable with a long I, and the S silent as it would have been in French,—i. e. just as we pronounce dime, we could then more easily understand the evolution. The form "Dime" appears in the report of the Committee of the Continental Congress under date of April 8, 1786,<sup>1</sup> and there is little cause for thinking that this word was ever pronounced other than it is now. Unfortunately we have no direct evidence

<sup>1</sup> Printed as an appendix to Watson's History of American Coinage.

that this was the original pronunciation for the term.

For the benefit of the collector starting this series, we refer to Mr. H. P. Newlin's work on "Early Half Dimes,"<sup>1</sup> especially for the history of the half dimes of 1802. Except for a few unlisted varieties, there have been no facts discovered or additions made to the known and recorded history of the early half dimes since Mr. Newlin's work in 1883. C. Steigerwalt discovered an unmentioned variety of the 1795 issue. There are several other new finds described herein, and some of the descriptions differ from those of Mr. Newlin. We refer also to Snowden's "Description of Coins in the Cabinet of the U. S. Mint."<sup>2</sup> This collection, formerly in the mint at Philadelphia, is now in the National Museum at Washington, D. C. The Half Dimes from 1829 have also been treated by Will W. Neil<sup>3</sup> who described 187 varieties.

If a specimen is worn or dirty, it is difficult and often impossible to count the leaves, the berries, etc. Having made a list of the "Paper Fractional Currency" of the U. S., and having found unknown specimens after the list was supposedly finished, it would be vain to believe that this list is complete. My hope is that it may stimulate others to "carry

<sup>1</sup> A classification of the Early Half Dimes of the United States by Harold P. Newlin. Philadelphia 1883.

<sup>2</sup> A Description of Ancient and Modern Coins in the Cabinet Collection at the Mint of the United States by James Ross Snowden. Philadelphia 1860.

<sup>3</sup> The United States Half Dimes from 1829 through 1873. The Numismatist, August, 1927.

on." Credit is due to the assistance of F. C. C. Boyd in obtaining some of the scarce specimens, to the late Mr. David Prosky who gave aid and information as to distinctive varieties, and to Mr. Howland Wood for getting notes together, obtaining information, showing where improvements could be made, assisting and checking up the varieties, and for the illustrations.

It has been impossible to find a classification of the later series that is without some drawback. The classification of the die varieties of the same type is a difficult matter. Comparison of the obverses is usually the first step. This was done with the issues previous to 1829. The issues of 1829 and the types of later issues have a remarkable similarity of the obverse. There has been no difference in the die work of the bust itself noted in the issue of 1829-37. The difference in the die work of the reverse is much more readily recognizable, the reason being that a hub or punch was made for the head and sometimes for the eagle, prior to 1800, and certainly for the eagle after that date. Punches were made for the stars, letters and figures. It is by the position of the stars, letters and numerals relative to one another or to the bust or eagle or motto, that the varieties can best be detected.

Alterations are recut portions of the design.

Die breaks are listed as sub-varieties, being accidents, and are of interest as they are the later impressions of a particular die, as well as evidence of identity of dies found on more than one specimen.

The size of the numerals of the dates and their position in relation to the bust and to each other, and the size of the stars and their positions with relation to the bust and to each other, have been the criterion in classifying the obverses of the 1829–37 issue.

On the reverse, the principal features are the position of the S's in the legend and motto; the size of the 5 C. and its relative position; the position of arrows—close or distant from the second A of America, and the relation of the letters in the legend to each other.

From 1837–52, the classification is based on the relative position of the date—high or low. The size and position of the numerals are also used, as are the size and relative position of all mint marks on the reverse.

Arrow-heads, one at each side of the date, appear in the issues of 1853–55. The relative position of the date—high or low—is first considered; then the size of the date, the position of the arrow-heads with respect to the date and the base of the seated figure, and finally, the size of the arrow-heads.

The arrow-heads do not appear on the issues of 1856–60. The method used for the 1837–52 applies to these issues, also to the obverse of the issues 1860–72. The relation of the ends of ribbon to the wreath on the reverse, and the size and position of mint mark letters are also significant.

Because of the difficulties that would have attended comparisons of reproductions of the coins



in their actual size, it has seemed desirable to enlarge them to two diameters.

Silver half dimes were struck at the Philadelphia mint in 1792, 1794–1797, 1800–1803, 1805, 1829–1873; at New Orleans in 1838–1842, 1844, 1848–1860; at San Francisco 1863–1869, 1871–1873.

The sizes are as follows:

1792: 11/16 in. or 17 mm.

1794–1805: 10/16 in. to 11/16 in. or 16–17 mm.

1829–1873: 19/32 in. or 15 mm.

The weights are as follows:

1792–1853: 20.8 grains.

1853–1873: 19.2 grains.

## 1792

### THE HALF DISME

*Obv.* Undraped bust of Liberty facing left, with rather short curly hair. Beneath the bust is the date, 1792. Legend:—LIB. PAR. OF SCIENCE & INDUSTRY.

*Rev.* UNI. STATES OF AMERICA. Small eagle flying towards the left, below in two lines; HALF DISME; in exergue, a five pointed star.

Edge, reeded. Size 11/16 in.; wt. 20.8 grs.

## 1794

### REGULAR SERIES

#### THE HALF DIME

**1** *Obv.* Undraped bust of Liberty facing right with flowing hair which ends in seven curls. Eight

stars to the left and seven to the right; below, is date 1794, near the lower edge. At the top is LIBERTY. The base of the E is slightly higher than the base of the other letters. The stars are six pointed, the lowest touches the two lowest curls and the next higher star is merged in the curl next above. The date is widely spaced and starts near the hair.

*Rev.* An eagle with open wings, standing on conventionalized clouds. These rest on the stems of a wreath formed by two sprays of laurel which do not quite meet above the eagle's head. The left spray ends with one leaf; the right with two. The left has 13 leaves and 6 berries; the right spray, 14 leaves and 7 berries. UNITED STATES OF AMERICA encircles the wreath. The base of the R does not touch the base of the I of AMERICA, and the leaf nearest that I does not touch it. Two berries, both inside the wreath, are under the left wing of the eagle, one under the right. The U of UNITED and the last A of AMERICA touch the lowest left and right leaves respectively.

**2** *Obv.* The two lowest curls touch four points of the lowest star, cutting two points shorter. The next higher curl does not touch the point of the star. The numerals of the date are evenly spaced. Compact date, the figure 4 is the only figure near the edge.

*Rev.* Die of No. 1.

**3** *Obv.* Die of No. 2.

*Rev.* The left spray ends with one leaf, the

right with three. There are three berries under the left wing, two are inside the wreath and one outside. The left spray has 7 berries, the right 6 berries. The lower leaf at right does not overlap the final A in AMERICA.

**3A** *Obv.* Die of No. 3.

*Rev.* Die of No. 3 but a crack extends under both wings and also through tail to lower edge.

**4.** *Obv.* The base of the E is slightly higher than the base of the other letters. The lowest star at the right near point of bust. The two inner points of the lowest one at the left touches the two lowest curls; the inner point of the star next above is evenly placed between the next two higher curls. The head is placed higher leaving more room between truncation of bust and edge of coin, consequently the date is farther from bust than on the other varieties.

*Rev.* Similar to No. 3. The left spray has 7 berries, the right spray 5 berries. There are 3 berries all within wreath under left wing.

This reverse die was originally used combined with the 1795 obverse No. 1,—it shows the die sharp and unbroken, while the several specimens of the 1794 examined (both No. 4 and No. 4A), show slight die breaks. One of these runs from D of UNITED through the wing, and another from the edge through wreath into the eagle's tail. This leaves no alternative to a decision that the 1794 pieces from this die must have been struck in 1795, despite the date. Other similar instances occur later on.

**4A** *Obv.* Die of No. 4, but die crack runs from second star from the top at right through head to opposite rim touching the next to the lowest star at the left.

*Rev.* Die of No. 4. Struck in 1795.

### 1795

The obverse and reverse of this year are of the same type as that for 1794.

**1** *Obv.* The curls terminate in seven ends, the second lowest touches point of lowest star. The 1 and 5 of date are not close to bust, nor is the lowest star on the right. A die crack extends from right edge between T and Y of LIBERTY, through the forehead and into the hair.

*Rev.* Die of 1794.4, but shows no die breaks. See the remarks under the above coin.

**2** *Obv.* There are 7 curls that end in points—the two lower touch the two inner points of the lowest star. The lowest star at right is very close to the bust. LIBERTY is better spaced. The figure 1 in date does not touch the hair; the 5 merges into the bust.

*Rev.* Two branches almost touch at the top. There are 13 leaves and 7 berries on the left spray, and 13 leaves and 7 berries on the right; 4 berries below the eagle's wings—3 on the inside and 1 on the outside of the wreath. This die has a similarity to the 1794 dies.

**2A** *Obv.* Die of No. 2, but a die crack at the top

edge extends through R of LIBERTY and the hair below.

*Rev.* Die of No. 2.

**3** *Obv.* The end of the lowest of the 6 curls touches the third point of the lowest star; the second point of same star is very close to the second lowest curl. The date is similar to that of No. 2, but the last numeral touches without merging. A bad die break at right edge involves four of the stars.

*Rev.* Die of No. 2.

**4** *Obv.* The next to the lowest curl touches the second point of lowest star. The lowest star at the right touches the point of the bust. The date is high; the numerals are evenly spaced; the figure 1 touches the hair; the 5 touches the bust. There is more space between the B and E in LIBERTY than on other dies of this year.

*Rev.* The wreath has 14 leaves and 5 berries on the left, and 14 leaves and 5 berries on the right. One of the leaves on the left is superimposed on another and does not show on worn specimens. There is a berry between the U and N of UNITED, and a very small berry between the T and E, and two berries under the first T of STATES.

**4A** *Obv.* Die of No. 4, but there is a die-crack at edge over TY of LIBERTY and the nearest star.

*Rev.* Die of No. 4.

**5** *Obv.* The lowest star almost touches the second lowest curl. The 1 is very close to the hair; the 5 does not touch, nor does the lowest star at

the right. The B and E of LIBERTY are close together, and the base of the E is above the line of the bases of the other letters. The LIB is widely spaced.

*Rev.* The wreath has 10 leaves and 3 berries on the left, and 15 leaves and 4 berries on the right. Two of the leaves under the eagle's wing barely show. There is no berry under either wing of the eagle.

**5A** Die of No. 5, but a die crack shows from Y of LIBERTY to nose.

**6** *Obv.* Die of No. 5A, but with the crack extending through cheek, bust and 7 to edge.

*Rev.* The spray at left has 13 leaves and 4 berries, the berry under the eagle's wing is inside the wreath and at base of U of UNITED, and there are two berries under the first s of STATES. The spray at right has 13 berries and 5 berries.

**7** *Obv.* There are six curls; the point of lowest one touches but does not pass point of lowest star; the point of the second curl above touches the point of lowest star. The 1 and 5 of date touch bust, and the lowest star on right does not touch. A die crack at three lowest stars on right runs through the point of bust and 9 and 5 of date.

*Rev.* Die of No. 5.

**8** *Obv.* The hair almost touches the E of LIBERTY—the only variety showing this characteristic. There are seven curls, the lowest two touch three points of lowest star. The next higher curl almost touches the point of the next higher star. The 1 and 5 of date do not touch bust, nor does the lowest

star on the right. A die crack shows at edge between RT of LIBERTY, and extends through forehead and hair to opposite edge.

*Rev.* Die of No. 5.

**9** *Obv.* The 1 of date touches bust; the top of 5 differs from No. 3; star at right close to bust; last curl meets points of last star, but does not pass through it.

*Rev.* Same as No. 5.

This description is based on Newlin's No. 6, who states that only one specimen has been noticed.

**10** *Obv.* There are seven curls. The lowest left star touches points of the two lowest curls. The next higher star touches point of the fifth curl counting from above. The date is clear of bust though close.

*Rev.* Same as No. 1, or 1794.4.

## 1796

**1** *Obv.* Draped bust of Liberty, facing to the right, the hair tied with ribbon at back of head. At right, seven stars. At left, back of the bust, eight stars. Above, LIBERTY. Below, 1796. The numeral 1 touches the lowest curl. The 6 has a *knob* and is near bust. The lowest star at left touches hair, and the lowest star at right touches the bust.

*Rev.* An eagle with open wings standing on clouds, enclosed by a wreath—a spray of laurel on the left and a palm branch on the right, tied at the

bottom with a bow knotted ribbon.<sup>1</sup> The laurel has 15 leaves and 4 berries. The palm has 11 leaves. Legend:—UNITED STATES OF AMERICA. A berry is just under D of UNITED. A slight die crack between T and A of STATES.

**2** *Obv.* The 1 of date does not touch curl, nor does the star on right touch bust; the 6 in date is pointed.

*Rev.* The N of UNITED merges with leaf. The point of eagle's left wing touches a leaf, and the other wing is under two sprigs.

### 1797

**1** *Obv.* The type is very similar to that of previous year. There are but 13 stars—7 on the left and six on the right. The lowest left star is not near the hair; the lowest right star is close to the bust. The 1 in the date is very close to lowest curl; the two 7's are longer than the other numerals.

*Rev.* The spray of laurel has 19 leaves and 11 berries. The palm has 17 leaves; the sprays touch at top. The E of UNITED, second T and second S of STATES, O of OF, and M and second A of AMERICA, touch leaves or stem of wreath.

**2** *Obv.* The obverse has 15 stars—eight on the left, seven on the right. The upper right star touches Y of LIBERTY; the lowest on the right touches bust. The lowest star on left does not touch hair. The 1 of date does not touch curl. The 7's are short, the second 7 being a trifle the shorter.

<sup>1</sup> This wreath is often described as composed of olive and lily sprays.



*Rev.* The spray of laurel has 15 leaves and 3 berries, one outside, two within. The palm branch has 11 leaves. The E of UNITED, the first T of STATES, and the M, E and C of AMERICA touch leaves of the wreath.

**2A** *Obv.* A die crack runs from lower right edge through drapery and bust.

*Rev.* Crack at edge over ME of AMERICA.

**2B** Same cracks, but on obverse greatly extended, going through 9 of date, face, and T of LIBERTY.

**3** *Obv.* There are 16 stars—9 at left and 7 at right. The first and second, third and fourth, and fifth and sixth stars at right touch each other. Counting from the top, as before, the second, third, fourth and fifth, and the sixth and seventh stars at left touch each other. The second 7 of date is the longer. A slight die crack between second and third star to edge, at left.

*Rev.* The spray of laurel has 16 leaves and 3 berries—two outside and one inside the wreath, the uppermost berry being outside the wreath and opposite D of UNITED. The palm branch has 11 leaves. None of the leaves touch the letters of the legend.

**4** *Obv.* Die of No. 3.

*Rev.* Die of No. 2A.

No half-dimes were issued in the years 1798 and 1799.

## 1800

**1** *Obv.* Draped bust of Liberty, with filleted hair, facing to right. Seven stars at the left; six at

right. LIBERTY, with a heavy I, at the top, and the date 1800 below the bust. The figure 8 is larger and lower than the other numerals; the second 0 is near bust, as is the lowest star at the right.

*Rev.* A heraldic eagle with the shield of the United States covering the body, the upper third is made up of eight horizontal lines (*azure*), the lower two-thirds has six groups of lines, three vertical (*gules*). The eagle holds in its beak a scroll or ribbon, on which is E PLURIBUS UNUM. The talon on the right holds a spray of olive with 10 leaves and 5 berries. Within an arch of clouds over the eagle, is a constellation of 13 stars. Legend:—UNITED STATES OF AMERICA. The first A of AMERICA touches the wing, and the I, C, and second A touch olive leaves.

**1A** As No. 1, but has a die break at reeding, below 00 of date.

**2** *Obv.* The R in LIBERTY is defective and resembles a K. The stars appear larger and closer than in No. 1.

*Rev.* Die of No. 1.

### 1801

**1** *Obv.* Very similar to No. 1 of 1800, but the first 1 of date touches curl, and the numerals are smaller.

*Rev.* The eagle's beak touches the second point of the star, and the second A of AMERICA does not touch a leaf.

**1A** *Obv.* A flaw shows in field between face and second, third and fourth stars at right.

**1B** This flaw has now developed into a decided crack, extending from Y of LIBERTY to sixth star at right.

**2** *Obv.* Similar to No. 1, but die break under bust at 1 and 8 of date which almost obliterates these two figures.

*Rev.* Same as No. 1.

### 1802

**1** *Obv.* Similar to above, but the 1 of the date does not touch curl; the 2 of date touches bust. The 8 is larger than in the previous eighteen hundreds.

*Rev.* Die of 1801.1.

### 1803

**1** *Obv.* Very similar to 1801. The 8 of date is large; the 3 small.

*Rev.* Die of 1801.1. Leaf touches c of AMERICA.

**2** *Obv.* Die of No. 1.

*Rev.* Leaf touches second A of AMERICA, not c. Perfect dies.

**3** *Obv.* Small 8 in date which is high, there appears die breaks at edge below bust, and at edge at top star at right.

*Rev.* Die of No. 1, and 1801.1. c of AMERICA touches leaf.

**1805**

**1** *Obv.* Similar to 1801. The 1 of date is close to curl and not close to 8.

*Rev.* Die of 1803.2.

There were no half-dimes coined from 1805 to 1829. These *early* half-dimes bore no indication of the coin value. Until 1829 when the half-dime appeared in a smaller size but thicker, of an entirely different type, and with 5 c. on the reverse.

**1829**

The obverse has a draped bust of Liberty, facing to left, with flowing curls covered by a liberty cap, on the band of which is the word LIBERTY. There are seven stars to the left and six at the right. Beneath the bust is the 1829.

The reverse bears an eagle with upraised wings, with the shield of the United States on breast, on the upper third of which are six horizontal lines (*azure*), and on the lower portion are six groups of three vertical lines (*gules*). The eagle's talon on the right clutches three arrows with their heads toward the right. The talon on the left clutches a spray of olive with four pairs of leaves and two berries. The stem crosses the feathered end of an arrow. The legend, UNITED STATES OF AMERICA starts near the eagle's wing at the left, and ends near the head of the uppermost arrow. The denomination 5 c. appears in the lower field below the feathers of the arrow and the olive stem on the field. Between the legend and the eagle is a

curved ribbon with the ends curled beneath it, on which is the motto E PLURIBUS UNUM. The end at the left starts under the T of UNITED, and the right end is under the M of AMERICA.

### CLASSIFICATION

The relative position of the second s of the word STATES in the legend with respect to the location of the s in PLURIBUS of the motto, is the initial basis of the classification. The die having the lower s furthest to the left of the other, is listed first. When the two s's are in almost the same relative position, the relation of the letters OF of the legend with regard to UN of the motto, and with respect to the point at which the ribbon ends and the location of the M in AMERICA above it, are next to be considered. When two obverses share identical reverse dies, the obverse having the date in the higher position is listed first.

### 1829

**1** *Obv.* Medium date, rather compact, and below the center of the field. The top of the 1 is recut. A faint vertical die crack runs from I of LIBERTY, through cheek and neck.

*Rev.* The s is under the E and the space between E s. The UN is to the left of OF. In the legend, UN and MERI touch. One arrow-head touches a shaft of another. Arrow close to A. Large 5 C. near edge. Short top to 5. There is a flaw in field between eagle's beak and ribbon, and

the lower part of F in OF is defective. This die is especially interesting as it is found combined with obverse dies of 1830, 1831 and 1832. For further information see 1831.2.

**1A** *Obv.* Same as No. 1, but crack between third and fourth star at left.

*Rev.* Same as No. 1.

**2** *Obv.* Medium date, rather compact; below the center of the field. The lower part of 9 at knob double punched.

*Rev.* The s is under the space. The UN is slightly to the left of OF. CA are the only letters in the legend which touch. Two arrow-heads touch shafts. Arrow close to A. Small 5; large C, compact and high. The c almost touches the olive stem.

**3** *Obv.* Large open date, low. Left side of 8 and top partly double cut, which only shows under a powerful glass.

*Rev.* s under space. In the legend NI and ER touch. One arrow-head touches. A not close. 5 and c spaced. Top of 5 long. Top of i double-cut.

**4** *Obv.* The date is slightly low in the field. The 2 is lower than the other figures.

*Rev.* The s is to the left of s, which is double cut at the top. The UN is slightly to the left of OF. In the legend, UN, TE and ERI touch. Two arrow-heads touch shafts. Arrow close to A. Large open 5 c.

**5** *Obv.* Die of No. 1.

*Rev.* Die of No. 4, but the N in UNITED and second s in STATES are defective; also die crack at E in AMERICA, which extends to the R.

**6** *Obv.* Die of No. 1.

*Rev.* The s is slightly to the left of s. The UN is under OF. One arrow-head touches shaft. Arrow not close to A. Large open 5 c. well placed. Short top to 5.

**7** *Obv.* Medium open date; low.

*Rev.* The s is under s. The UN is under OF. In the legend ED, TE and MERI touch. One arrow-head touches the shaft. Arrow not close to A. Large, open 5 c. well placed.

**8** *Obv.* Die of No. 1.

*Rev.* The s is under s. The UN is under OF. All letters in legend are spaced, but TE, AM and RI are close. Two arrow-heads touch shafts. Arrow not close to A. Large, open 5 c. slightly high. Short top to 5. For the further use of this die see 1830-9.

**9** *Obv.* Similar to No. 4, but the date at right end is lower. Top of 9 double-cut.

*Rev.* Die of No. 8.

**10** *Obv.* Die of No. 4.

*Rev.* The s is almost under s. UN to right of OF. In the legend, NIT and RI touch. One arrow-head touches the shaft. Arrow close to A. Large 5 c. A small line shows between upper part of c and A in AMERICA. This reverse die was used again in 1831 No. 7.

**11** *Obv.* Die of No. 2.

*Rev.* Die of No. 10.

**12** *Obv.* Die of No. 9.

*Rev.* The s is directly under the s. A slight

flaw above ribbon between the two s's. The UN to right of OF. In the legend, IT and ME touch. Two arrow-heads touch shafts. Arrow not close to A. Large, open 5 c. rather low. For further use of this die see 1830.10.

**12A** Similar to No. 12, but with cracks at RIC on reverse.

The following obverses are the same:

Nos. 1, 5, 6, 8.

Nos. 2, 11.

Nos. 4, 10.

Nos. 9, 12.

### 1830

**1** *Obv.* Medium, compact date; slightly low.

*Rev.* The s is under the E. In the legend, TE and RI touch, and I very close to C. Two arrow-heads touch shafts. Arrow touches A. Compact 5 c. slightly high, the 5 is higher than the c. This die was used again in 1832.1.

**2** *Obv.* Small, compact date, near edge. A faint die break shows from sixth star through cap and between eighth and ninth stars.

*Rev.* Die of 1829 No. 1. The s is under the E, and space between ES, the label ending under the left upright of M. F of OF defective. In the legend, UN and MERI touch. One arrow-head touches a shaft. Short top to 5.

**3** *Obv.* Medium, evenly spaced date; rather low.

*Rev.* The s is under the E and the space between ES. Center of UN is to the left of center of



**OF.** The label ends almost under the center of **M**. All letters in legend spaced, although the second **TE** and **CA** are close. Two arrow-heads touch shafts. Arrow rather close to **A**. Large, close 5 c.; high. There is a defect at top of the upperstroke of 5.

**3A** *Obv.* Same as No. 3. A die crack runs through lower left star and on some impressions a break shows on cheek under curl.

*Rev.* Die of No. 3.

**3B** *Obv.* Same as No. 3A.

*Rev.* Same as No. 3, but the upper part of the second **s** in **STATES** shows a defect.

**4** *Obv.* Small, compact date; low. The distinguishing feature of this variety is a small circle on neck under ear—the compass point in laying out the die.

*Rev.* Die of No. 3B.

**5** *Obv.* Die of No. 2.

*Rev.* The **s** is a little more under the **s**, the label ends under the right part of the first stroke of **M**, and the **A** is closer to arrow. The 5 c. is larger, with very short top to 5, more open and not as high. Second **s** in **STATES** and **M** in **AMERICA** are defective. This die was first used in 1831 in No. 6.

**5A** The same as No. 6, but both **s**'s in **STATES** are defective.

**6** *Obv.* Die of No. 4.

*Rev.* The **s** is nearly under **s**. **UN** under **OF**. The letters in legend are spaced, but **IT**, **ED** and **RI** are very close. Two arrow-heads touch shafts. Arrow not close to **A**. Large, open 5 c. well placed.

Small top to 5, the upright stroke of which is double cut.

**7** *Obv.* Compact date low. The 1 in date is tall and curves to the right, the 8 low.

*Rev.* Die of No. 6.

**7A** *Obv.* A faint die crack runs from edge to 3 and 0 to curl.

**8** *Obv.* Die of No. 3. Medium date, open, not close to edge.

*Rev.* s to left under center of s. Left base of A in STATES high and close to first T. Large open 5 with short top.

**9** *Obv.* Medium irregular date. 8 and 3 too close; 0 too high.

*Rev.* Die of 1829 No. 8.

**10** *Obv.* Die of No. 9.

*Rev.* Die of 1829 No. 10, but die crack shows at RIC.

The following obverses are the same:

Nos. 2, 5.

Nos. 3, 8.

Nos. 4, 6.

Nos. 9, 10.

### 1831

**1** *Obv.* Irregular date; rather low. The first 1 is rather large and not as close as the other numerals. The last 1 is also large.

*Rev.* The s is wholly under E. All letters except RI in the legend are spaced. One arrow-head touches shaft. Arrow fairly close to A. Large 5 c. with small top, well placed.

**1A** Same as No. 1, but the upper and lower sections of the second s in STATES are defective.

This reverse die was used again later. See 1833.1 and 1835.2.

**2** *Obv.* A more compact date. A die crack connects most of the stars on left, and another connects some on right. No pupil to eye.

*Rev.* The die of 1829 No. 1, and 1830 No. 2, but the defects between the eagle's beak and ribbon do not show and the die apparently seems sharp. The F in OF is defective. It is very possible that those pieces combined with this die and bearing the dates of 1829 and 1830, were struck in 1831 or 1832.

**3** *Obv.* Die of No. 1.

*Rev.* The die of 1829 No. 1, and 1830 No. 2, but the flaw at eagle's beak not so distinct.

**4** *Obv.* Very similar to No. 1. The date more evenly spaced and a little further to the right.

*Rev.* Die of No. 3.

**5** *Obv.* Die of No. 4.

*Rev.* The center of the s is under the center of the space between ES. The center of UN to the left of the center of OF. In the legend, the RI touch, and UN are close. Two arrow-heads touch. Arrow not close to A. Widely spaced 5 c. with small top to 5. A die break runs from edge through A of STATES and ribbon to eagle's beak.

**5A** *Obv.* Same as No. 5.

*Rev.* Same as No. 5, but the N in UNITED and the first s in STATES are defective.

**6** *Obv.* Die of No. 2, but none of the die breaks show.

*Rev.* Die later used in 1830 No. 5 In this instance the defects in the lettering have not occurred.

**6A** *Obv.* Same as No. 6.

*Rev.* Same as No. 6. The second s in STATES is defective at top loop and the M in AMERICA is defective.

**6B** *Obv.* Same as No. 6.

*Rev.* Same as No. 6, but both s's defective.

**6C** *Obv.* Same as No. 6.

*Rev.* Die cracks show at NIT in UNITED, as well as at top loop of both s's in STATES.

**7** *Obv.* Same as No. 2, but die breaks barely show.

*Rev.* Same as 1829 No. 10.

**7A** *Rev.* Die break shows at edge to R of AMERICA; otherwise the same as No. 7.

The following obverses are alike:

Nos. 1, 3.

Nos. 2, 6, 7.

Nos. 4, 5.

### 1832

**1** *Obv.* Large open date; well placed. 1 and 2 high.

*Rev.* Die of 1830 No. 1. A defective crack in second T in STATES. Two arrow-heads touch shafts. Arrow touches A.

**2** *Obv.* Small, compact date; slight low.

*Rev.* The s is almost under E. The UN is to the left of OF; both letters of OF double cut. In

the legend, AME touch. Large open 5 c. high. Top part of 5 defective. This die was used in 1833; see No. 2.

**2A** *Obv.* A die crack in the bottom loop of 8.

*Rev.* Same as No. 2.

**3** *Obv.* Large, open date; low. 832 close.

*Rev.* The die of 1829 No. 1, 1830 No. 2 and 1831 No. 2; as noted under 1831, the flaws are nearly obliterated. The surface of the die has become so worn that the berries in the spray do not show. (Mr. Proskey saw but two thus.)

**4** *Obv.* Die of No. 3. Crack, first star to edge.

*Rev.* The s is under the space between the ES. The UN is slightly to the left of OF. o of OF double cut. In the legend, RI touch. Two arrow-heads touch shafts. Arrow touches A. Large, compact 5 c. well placed. Small die break through A of AMERICA into ribbon. This die is found without the die break on No. 3 of 1833, showing that this piece was struck in 1833.

**5** *Obv.* Large, open date; well placed, the 1 high.

*Rev.* The s is slightly to the left of s. The UN is almost under OF. All letters in the legend are spaced. One arrow-head touches shaft. Arrow not close to A. Large compact 5 c. high. For further use of this die see 1833.4.

**5A** *Obv.* Die of No. 5.

*Rev.* Both s's in STATES defective and slight die breaks show especially about UNITED. As we have this reverse in perfect shape combined with 1833 No. 4, this piece with defective s's must have been struck in 1833.

**6** *Obv.* Die of No. 2A, showing the defective 8.

*Rev.* The s is almost under the s. The UN is under OF. All letters in legend are spaced. One arrow-head touches, arrow rather close to A. Large, open 5 c. high. For further use of this die see 1833.5 and 6.

**7** *Obv.* Die of No. 2A.

*Rev.* The s is almost under s. The UN is slightly to right of OF. In the legend, RI touch. Arrow-heads are clear. Arrow not close to A. Large open 5 c. slightly high. For subsequent use of this die see 1834.3 and 1835.8.

**8** *Obv.* Open date; slightly low.

*Rev.* The s is almost under s. The UN is under OF. All letters in the legend are spaced. The second s of STATES is defective at top loop. The N and F are also defective. One arrow-head touches, arrow close to A. Open 5 c. slightly high.

**8A** *Obv.* Die of No. 8.

*Rev.* Die of No. 8, but loop of first s and both loops of second s are defective.

**8B** *Obv.* Die of No. 8.

*Rev.* Die of No. 8, but both loops in both s's are defective.

**8C** *Obv.* Die of No. 8.

*Rev.* Die of No. 8, but additional crack from ribbon to A of STATES to edge.

**9** *Obv.* Die of No. 8.

*Rev.* The s is slightly to right of s. The UN slightly to right of OF. In the legend, RI very close. The upper loop of first s in STATES is defective.

One arrow-head touches shaft. Arrow not close to A. Large, open 5 c. slightly high. For further use of this die see 1833.7.

**9A** *Obv.* Same as No. 9, but die crack connects several stars at left which runs through bust to 1 of date.

*Rev.* Same as No. 9, but 5 c. are both recut. The following obverses are alike.

Nos. 2, 6, 7.

Nos. 3, 4.

Nos. 8, 9.

### 1833

There seem to have been no new reverse dies made this year unless possibly the reverse of No. 3. This die is found combined with an 1832 obverse, but in this instance the reverse die is not in as good a state, as it is combined with the 1833 obverse. This again leads us to the conclusion that the coin No. 4 having date of 1832, was struck in 1833.

**1** *Obv.* Large regular date, well placed. The 1 open, 83 close. A die break runs from cap through cheek, neck and bust.

*Rev.* The die of 1831 No. 1A. The s under E. The UN to the left of OF. All letters except RI spaced in the legend. The second s in STATES is defective in both loops. One arrow-head touches shaft. Large 5 c. well placed. This die was put into use again, see 1835.2.

**2** *Obv.* Die of No. 1.

*Rev.* The die of 1832 No. 2. The s is almost under E. The UN to left of OF, both letters of OF

double cut. In the legend, AME touch. One arrow-head touches shaft. Arrow rather close to A. Large, open 5 c.; high.

**3** *Obv.* Large, open date; well placed.

*Rev.* The die of 1832 No. 4. The s under space between ES. The UN is to the left of OF. o of OF double cut. In the legend RI touch. Two arrow-heads touch shafts. Arrow touches A. As this die is in much better condition when this was struck, than when the coin of the previous year was struck, we can come to the conclusion only that the coin dated 1832, No. 4, was struck in 1833.

**4** *Obv.* Same as No. 3.

*Rev.* Die of 1832 No. 5. The s is slightly to the left of s. The UN is almost under the OF. All letters spaced in the legend. One arrow-head touches shaft. As 1832 No. 5A, shows a broken die, some if not all of those date 1832 must have been struck in 1833.

**4A** *Obv.* This die is beginning to show signs of wear and cracking, especially before face.

*Rev.* Same as No. 4.

**4B** *Obv.* Same as No. 4A.

*Rev.* Same as No. 5A of 1832, but the die cracks are not quite as far advanced. Defects in E and both s's.

**5** *Obv.* Die of No. 1, but before die cracked.

*Rev.* The die of 1832 No. 6. The s is slightly left under s. The UN is under OF. All letters spaced in the legend. One arrow-head touches shaft. Arrow close to A. Large, open 5 c.; rather high.



**6** *Obv.* Same as No. 4A, but 8 is defective in lower loop, and a crack runs from L of LIBERTY through cap to edge.

*Rev.* Die of 1832 No. 6.

**7** *Obv.* Large, open date; well placed. The two 3's are closer together than the other numerals.

*Rev.* Same die as 1832 No. 9. The s slightly to right under s. The UN is slightly to right of OF. Top loop in first s in STATES is defective. One arrow-head touches shaft. Arrow not close to A. Large open 5 c. slightly high.

The following obverses are alike:

Nos. 1, 2, 5.

Nos. 3, 4, 6.

### 1834

**1** *Obv.* Small, irregular, compact date, the 4 being large. Upper right hand star touches cap.

*Rev.* The s is under E and space between E and s. The UN to left of OF. In the legend, AME and RI touch. The top loop of second s in STATES is defective. Arrow-heads do not touch shafts. Arrow touches A. Large, rather close 5 c.; high, the 5 higher than the c.

**1A** *Obv.* Same as No. 1, but die crack shows from upper left-hand star into cap, and from nose into neck.

*Rev.* Same as No. 1.

**2** *Obv.* Medium, irregular date; slightly low. The lower loop of 8 is defective.

*Rev.* Die of No. 1.

**3** *Obv.* Same as No. 1A.

*Rev.* Die of 1832 No. 7. The UN is under OF. In the legend, RI touch. The N in UNITED is defective at upper right. One arrow-head nearly touches shaft. Arrow not close to A. Large, open 5 c.; slightly high. For further use of this die see 1835.8.

**4** *Obv.* Irregular date; rather low and compact. The 8 is high, the 3 low. There is a slight crack from throat to bust to edge. Upper lefthand star points to top of coronet.

*Rev.* Die of No. 3.

**5** *Obv.* Die of No. 2 but flaw does not show in 8.

*Rev.* The s is to the right of s. The UN is far to right of OF. All letters of the legend are spaced, though close. Two arrow-heads touch shafts. Arrow not close to A. Large, rather close 5 c., high. The c touches the stem.

**5A** *Obv.* The same as No. 2, showing the defective 8.

*Rev.* Same as No. 5.

The following obverses are alike:

Nos. 1, 3.

Nos. 2, 5.

### 1835

In this year new punches were made for the numerals much smaller than those heretofore used so that we have for 1835, actually large and small dates. The pieces for 1836 and 1837 have only small dates. In 1836 and 1837 the denticulations around the edge are also much finer.

On the reverse the 5 c. comes both large and small and these two varieties are found on the next two years as well.

**1** *Obv.* Small, compact rather low date. The 3 low. Long curved top to 5.

*Rev.* The s is under the E. The UN is to the left of OF. In the legend, TE of UNITED touch at tops. R double cut. Two arrow-heads touch shafts. Arrow touches A. Small, open 5 c.; well placed.

This die was used again in 1836.

**2** *Obv.* Large, rather compact date; low. Small top to 5.

*Rev.* The die of 1831 No. 1A and 1833 No. 1. The s is under E. The UN is to left of OF. In the legend, RI touch. Die cracks starting from A to arrows, top of 5 to laurel, I of UNITED to label. Both loops of second s in STATES defective.

**2A** *Obv.* Die of No. 2.

*Rev.* The die is now badly cracked—edge to eagle's wing, edge to I to label to E, both loops in second s in STATES, A to points of two arrows, 5 to laurel.

**3** *Obv.* Large, open date; well placed. Small flat top to 5.

*Rev.* The s is under space between ES. The UN is to the left of OF. In the legend, RI touch. One arrow-head touches shaft. Arrow very close to A. Large 5 c. well placed. Large period.

**3A** *Obv.* Die of No. 3. Die crack from edge through 183 of date.

*Rev.* Die of No. 3, but a bad die break at CA in AMERICA.

**4** *Obv.* Die of No. 2.

*Rev.* The s is under the space between the ES. The UN is to the left of OF. In the legend, ED, ME and RI touch. Two arrow-heads touch shafts. Arrow not close to A. Large 5 c., the 5 low, the c high.

**4A** Same as No. 4. A faint die break runs through the four middle stars at right.

**5** *Obv.* Small, compact date, low. The 1 higher than the other figures.

*Rev.* Die of No. 4, but a die break at left is just starting.

**6** *Obv.* Die of No. 1.

*Rev.* Die of No. 4.

**6A** *Obv.* Die of No. 1.

*Rev.* Die of No. 4, but there is a bad die break from T to ribbon and to edge between D and S. For the subsequent use of this die see 1836.5.

**7** *Obv.* Almost identical with die No. 1, but the 8 is higher and the 3 lower.

*Rev.* The s is under the space between the ES. The UN is under OF. In the legend, all letters are spaced. The top loops in the two s's in STATES are defective. One arrow-head touches shaft. Arrow close to A. Small 5 c., high.

This die was used also in 1837.

**7A** *Obv.* Die of No. 7, but third star at left is defective.

*Rev.* Die of No. 7.

**8** *Obv.* Die of No. 2.

*Rev.* Die of 1832 No. 7 and 1834 No. 3. The s is almost under s. The label ends under the center of M. In the legend, all letters are spaced. The N is defective. No arrow-head touches. Arrow not close to A. Large, open 5 c., slightly high.

**9** *Obv.* Die of No. 2.

*Rev.* The s is under s. The UN is slightly right of OF. In the legend, ME touch. One arrow-head touches shaft. Arrow distant from A. Small 5, larger c.

**9A** *Obv.* Die of No. 2.

*Rev.* Die of No. 9, but a faint die crack is beginning from edge through s.

**10** *Obv.* Large, open irregular date. The 18 lower than the 35. Die break from top of cap to edge.

*Rev.* Die of No. 9, but the die crack shows from edge through second s of STATES to label.

The following obverses are alike:

Nos. 1, 6.

Nos. 2, 4, 8, 9.

### 1836

**1** *Obv.* Small, open date, low.

*Rev.* Die of 1835 No. 1.

**1A** *Obv.* Same as No. 1, but a vertical die crack, running through cap, hair and left part of 6 in date.

*Rev.* Same as No. 1.

**2** *Obv.* Small, open date; well placed, the 8 and

3 a trifle lower than other figures. Lower right star close to hair. Several stars defective.

*Rev.* Die of No. 1.

**3** *Obv.* Small, slightly compact, irregular date. Slightly low. The 3 lower than the 8 and 6, and close to 6. Upper right star distant from cap.

*Rev.* The s is to the right of E. The UN is to left of OF. In the legend, ED, MERI are very close or touch. Large 5 c., high.

**4** *Obv.* Similar to No. 1, but star close to cap.

*Rev.* The UN is slightly to the left of OF. The o in OF is low. In the legend, ME touch. The U is double cut. Two arrow-heads touch shafts. Arrow touches A. Large, open 5 c., slightly high. The 5 has a broad, curved top.

**5** *Obv.* Die of No. 1A.

*Rev.* Die of 1835 No. 6, showing the bad break at left.

**6** *Obv.* Die of No. 2.

*Rev.* The s is almost under s. The UN is under OF. In the legend, TED, ME and RI touch. The U, N and D are double cut. Arrow close to A. The 5 small, the c larger.

The following obverses are alike:

Nos. 1, 5.

Nos. 2, 6.

### 1837

**1** *Obv.* Small, open date, well centered.

*Rev.* The s is under E and space. The UN is to the left of OF. In the legend, ERI touch. One arrow-head touches shaft. The first A in AMERICA

is defective. Arrow rather close to A. Large, open 5 c., high.

**2** *Obv.* Similar to No. 1, but date slightly lower. A faint die crack runs through cap, cheek and neck.

*Rev.* Die of 1835 No. 7. Small 5 c.

**3** *Obv.* Similar to No. 2, but the figure 7 is recut at base.

*Rev.* The s is under s. The UN is under OF. All letters in the legend are spaced. One arrow-head touches shaft. Arrow rather close to A. Large, open 5 c., high. Top of 5 long. There is a flaw in the field between 5 and c.

**3A** *Obv.* Same as No. 3, but a die crack runs through cap and hair.

*Rev.* Same as No. 3.

### SEATED LIBERTY TYPE

The new design by Christian Gobrecht has a draped figure of Liberty, seated to the right but head turned to the left. Her upraised left hand holds a pole on which is a Liberty cap, and with her right hand, she holds the upper corner of a shield which rests on the base. On the upper third of the shield or chief, are horizontal lines, the heraldic method of representing azure or blue. On the lower part the required palewise of thirteen pieces, argent and gules, are rendered by vertical lines in six pairs. From Liberty's hand holding the shield there is a band inscribed LIBERTY which runs diagonally across the shield. Liberty's right foot, sandalled, extends almost to the edge. In the field, below the base, is the date.

Reverse: within a wreath of two sprays of laurel, tied at the stems with a bow of knotted ribbon, are the words **HALF DIME**, in two lines. Each of the sprays of laurel bears 14 leaves and 6 berries. Legend: **UNITED STATES OF AMERICA**, in small letters. The obverse dies were made from a hub, the date being omitted. The dates were then added to the dies made from this hub as occasion required. In 1838, thirteen stars were added to the design, seven to the left of Liberty, one between the head and cap, and five to the right of the figure. In 1840, an entirely new hub was made which is described in detail under that date. This hub was in use as late as 1859. During that year, on account of wear, a new hub was made, showing only the most minute differences. In 1860, another hub was made, the legend on the reverse being transferred to the obverse. The dies for the reverse were made from a single hub, which was in use as late as 1840, when another hub with slight changes was introduced. Consequently it is impossible to distinguish the dies used, as there is no variation in the spacing of the letters or their relation to the wreath. Only when some imperfection such as a die-break occurs, can the reverse dies be differentiated. Heavy, medium and thin lettering is the result of a heavier or lighter impress of the hub into the die when being made, or sometimes is the result of a heavier or lighter striking of the coin. The type without stars was used in the Philadelphia mint in 1837 only. It was used in New Orleans in 1838 only.



## 1837

## LIBERTY SEATED, NO STARS

**1** *Obv.* Curved date, the whole double punched at the bottom. Later impressions show little or none of the double punching, due to the surface of the die wearing down.

*Rev.* HALF DIME within wreath; around, UNITED STATES OF AMERICA, in small letters. Perfect die. Proof.

**2** *Obv.* Probably the die of No. 1, but the double punching of the date does not show. A die crack runs through Liberty cap to edge, in base under foot, and from shield to edge.

*Rev.* Heavy lettering. Right base of first T in STATES and A in AMERICA double punched. Tip of innermost leaf under D notched.

**3** *Obv.* Same as No. 2, but an earlier stage of the die breaks.

*Rev.* Thin lettering. There is a die crack at O of OF and at last A of AMERICA to rim.

**4** *Obv.* Similar, but date in a straight line. Perfect die.

*Rev.* Die of No. 2.

**4A** *Obv.* Die of No. 4, but there is a die break from cap to edge.

*Rev.* Die of No. 2.

**5** *Obv.* Die of No. 4, but there is a die break in raised edge at right.

*Rev.* Die of No. 1.

**5A** *Obv.* Die of No. 4, but with additional die

crack just beginning from cap to edge, slanting to the left.

*Rev.* Die of No. 1.

**5B** *Obv.* Same as No. 4A.

*Rev.* Die of No. 1, but die cracks show at top of both A's in AMERICA.

**6** *Obv.* This die is characterized by a bad flaw to right of arm holding Liberty cap, and continuing downward from the knee. Date in straight line.

*Rev.* Die of No. 2, but die crack begins to show from A and R of AMERICA to edge.

This coin as well as No. 6A and No. 6B, must have been struck in 1838, as we find perfect examples of this die combined with obverses dated 1838.

**6A** *Obv.* Same as No. 6, but die crack now extends from heel to edge.

*Rev.* Same as No. 6, but the die cracks more pronounced.

**6B** *Obv.* Same as No. 6A, but a further die crack runs from Liberty cap to edge.

*Rev.* Same as No. 6A.

## 1838

### LIBERTY SEATED WITH STARS

**1** *Obv.* The whole figure is badly corroded. Reading clockwise the 3rd, 4th, 9th, 11th and 12th stars are imperfect. High, thin, open date; thin stars; lowest left star not low nor close.

*Rev.* Thin letters. Die break at first A and C of AMERICA.

**1A** *Obv.* Die of No. 1, but showing much wear, the stars are very thin and a die break runs from edge through 13th star.

*Rev.* Medium lettering.

**2** *Obv.* Die of No. 1; a die break shows through lowest left star.

*Rev.* Thin letters. A flaw in background shows from M to E in DIME, and from top of E to wreath.

**3** *Obv.* Lowest left star close, and defective. Broken die at rim on lower right. There is a flaw in middle of right field.

*Rev.* Die similar to 1837 No. 2, showing nicked leaf, but there is a flaw in background under TES in STATES, and through OF.

**4** *Obv.* Lowest left star low and close. No defects in stars.

*Rev.* Die of No. 2.

**5** *Obv.* Die of No. 4.

*Rev.* Die of 1837 No. 2.

**6** *Obv.* The 1st, 3rd, and 8th stars defective. Lowest left star not low but close.

*Rev.* Die of 1837 No. 2.

**7** *Obv.* Die of No. 6.

*Rev.* From another die. Crack runs through F of OF into wreath.

**8** *Obv.* Die of No. 6.

*Rev.* Similar, but die cracks at M and I of AMERICA.

**9** *Obv.* The second star is defective. Lowest left star low and close.

*Rev.* Die of 1837 No. 2.

**10** *Obv.* First star low and close, all of the points on this star defective.

*Rev.* Similar to die of 1837 No. 2, but die badly broken between AMERICA and wreath.

**11** *Obv.* The 7th, 8th, 11th and 13th stars are defective, especially the 11th. Lowest left star not so low and rather close.

*Rev.* Die of No. 2.

**12** *Obv.* First star defective and there is a die crack through lowest right star. Top of 1 in date double cut.

*Rev.* Die of No. 7.

**13** *Obv.* The 2nd, 6th, 9th, 11th, 12th and 13th stars defective. Lowest left star low and close.

*Rev.* Die of No. 1, but only the faintest break at A shows.

**14** *Obv.* Die of No. 13, but the defects show plainer.

*Rev.* Die of No. 7.

### O MINT

**1** *Obv.* Medium open date. No stars.

*Rev.* Medium lettering. Rather large o; slightly low. Die break through mint letter.

**2** *Obv.* Low date, almost touches milling.

*Rev.* Medium lettering, no die breaks.

### 1839

**1** *Obv.* Thick, compact, high date. Lowest left star well placed. A slight defect in the 11th.

*Rev.* Medium lettering.

**2** *Obv.* Medium open low date, the 9 double cut. Slight defects show in 5th, 6th, 8th, 9th, and 10th stars.

*Rev.* Slight die break at c.

### O MINT

**1** *Obv.* Open, medium date, slightly high, the 9 double cut at bottom. Left star slightly low and close.

*Rev.* Large o.

**2** *Obv.* Open, high date. 1 and 9 recut at base. Left star well placed.

*Rev.* Die break through first T in STATES. Small o, slightly to left of center.

**2A** *Obv.* Die of No. 2.

*Rev.* Die of No. 2, but a second crack shows near the o of OF.

**2B** *Obv.* Die of No. 2.

*Rev.* Die of No. 2, but the cracks have now spread throughout the central part to the lower edge.

**3** *Obv.* Die of No. 2.

*Rev.* Small o in the center and well placed.

**3A** Same as No. 3, but the reverse die instead of being placed at a half turn, is placed at only a quarter turn.

**4** *Obv.* Date medium placed. The 9th star defective.

*Rev.* Similar to No. 3, but the o is lower.

**4A** *Obv.* Die of No. 4, but die crack shows at 2nd star as well as die break on rim at left.

*Rev.* Die of No. 4, but die cracks show at D, M and wreath.

**5** *Obv.* Date high. Left star low and close. Die breaks occur at 1st and 4th stars, top of head and from shield to 8 of date.

*Rev.* Similar to No. 3, but the O is lower.

**6** *Obv.* Rusted die of No. 4. Die breaks at 2nd star, head, 9 of date and crack through base to edge.

*Rev.* Rusted die similar to No. 4; cracked in many places.

### 1840

During the year new hubs were made for both obverse and reverse. The entire figure was remodelled. A fold of drapery shows under the arm holding the Liberty cap which has been made smaller and less pointed. The shield is now upright and the rock behind the figure does not project as far. The legend on the reverse is composed of taller letters.

**1** *Obv.* "No drapery" from left arm to knee. Compact, high date.

*Rev.* Small letters, a faint die break runs from D through E of UNITED into wreath.

**2** *Obv.* "No drapery." The right hand part of date is lower than the left. The date is medium spaced.

*Rev.* Small letters, slight defects in the background show back of the M in AMERICA.

**3** *Obv.* Similar to No. 2, but the date is a trifle lower.

*Rev.* Die of No. 1.

**4** *Obv.* "No drapery." Compact, even date; well placed. 8th star defective.

*Rev.* Small letters. There is a slight defect in background above right hand bow in knot.

**5** *Obv.* "No drapery." Open, large date; well placed. The 13th star defective.

*Rev.* Small letters. There is a flaw in the background between M and E of DIME.

**6** *Obv.* "No drapery." Open large date; slightly high. Die crack from top edge through Liberty and 8 to bottom edge. The 6th star is defective.

*Rev.* Small letters.

**7** *Obv.* New die, "drapery" from forearm to below knee. Heavy, close, high date. Lowest left star neither low nor close.

*Rev.* New die with larger lettering.

**7A** *Obv.* Die of No. 7.

*Rev.* Die of No. 7, but straight line scratches in die back of UNI, and A and C of AMERICA.

### O MINT

**1** *Obv.* "No drapery." Small, uneven date; rather high. Lowest left star close. The 1st, 8th, 11th and 13th stars defective.

*Rev.* Large, rather thin O. Small letters.

**2** *Obv.* "No drapery." Small, open date; rather high. Lowest left star rather low and close. The 3rd and 9th stars defective.

*Rev.* Small letters. Crack at U of UNITED and at bottom of wreath. O medium size, rather low and a little to the left.

**3** *Obv.* "No drapery." High date. Lowest left star not low. The 1st, 3rd, 5th and 10th stars defective.

*Rev.* Small letters. Small o, well placed. Die crack at A in STATES, and first and last A in AMERICA.

**4** *Obv.* "No drapery." Lowest left star not low but close. The 2nd, 5th, 6th and 12th stars defective. Date high.

*Rev.* Small o, well placed. A die crack runs from M of DIME, through o and bow knot to edge.

**5** *Obv.* New die with drapery. Compact date. Lowest left star not low nor close.

*Rev.* New die with large lettering. Small o, well placed. A die break shows from right hand stem to edge.

### 1841

**1** *Obv.* The two 1's in date lower than the 8 and 4. A scratch in die shows below arm holding Liberty cap.

*Rev.* Heavy lettering. A slight flaw above D of UNITED. Proof.

**2** *Obv.* First 1 and 84 high, last 1 low. A slight flaw between 10th and 11th stars.

*Rev.* Thin lettering. Struck from a shallow die.

**3** *Obv.* Date high; the 8 and 4 touch. They are slight flaws near 1st, 2nd, 3rd, 5th, 7th, 10th and 12th stars.

*Rev.* Die of No. 2.



## O MINT

**1** *Obv.* Open date, well placed, the last 1 low. Lowest left star not low nor close.

*Rev.* Small o to left of center. Medium lettering.

**1A** *Obv.* Die of No. 1.

*Rev.* Die of No. 1, but die breaks begin and show at N of UNITED, first T, A and last S of STATES and last A of AMERICA.

**2** *Obv.* Even date, slightly high.

*Rev.* Die of No. 1, but cracked as in No. 1A.

**3** *Obv.* Rather high date, the 8 and 4 double cut at bottom. The 4th, 5th, 6th, 7th, and 10th stars defective.

*Rev.* Medium o well placed. Heavy lettering. A die break is beginning at R of AMERICA.

**4** *Obv.* Tall, open date, not near base. The figure of Liberty is rough as if from a rusty die.

*Rev.* Medium o. Light lettering. Die cracks at U to leaf and edge, A and final S in STATES, and R and final A in AMERICA.

## 1842

**1** *Obv.* Open, heavy date, high. The 2 is a little lower than the other figures. Defects near 1st, 2nd, 3rd, 4th, 5th, 9th, 10th, and 11th stars.

*Rev.* Medium lettering. Perfect die. Proof.

**1A** *Obv.* Die of No. 1.

*Rev.* Die of No. 1, but a crack shows from first T of STATES through H of HALF, to rim at

bottom and from O of OF through wreath, F and E to bottom. There are several other die cracks through center of coin.

**2** *Obv.* Die of No. 1, but beginning to show wear, the defects around stars are not as pronounced.

*Rev.* The die of 1841 No. 2.

**2A** *Obv.* Die of No. 2, but die crack from edge through head, star, cap and the next two stars.

*Rev.* Die of No. 2.

**3** *Obv.* Tall date, medium spaced. All stars perfect. The 84 closer together. Edge of rim broken at left and bottom.

*Rev.* Medium lettering. A slight break at C of AMERICA.

**4** *Obv.* Heavy date, well placed, bases of 4 and 2 lower than the 1 and 8. 10th, 11th, 12th, and 13th stars defective.

*Rev.* Heaving lettering. Die cracks at D of UNITED and second T in STATES, both of which run into wreath.

## O MINT

**1** *Obv.* Heavy, compact, rather high date. Slight defect between 10th and 11th star.

*Rev.* Small o to left of center. Heavy lettering.

**2** *Obv.* Slender, open, medium date.

*Rev.* Small o, to left of center. Medium lettering.

**3** *Obv.* Slender somewhat compact medium date.

*Rev.* Small o, thin lettering. Possibly the same die as No. 2.

**1843**

**1** *Obv.* Heavy, high date. Heavy stars. Defects at 5th, 6th, 7th, 8th, 9th, 10th, 11th, and 12th stars.

*Rev.* Medium lettering.

**1A** *Obv.* Die of No. 1.

*Rev.* Die of No. 1, but a slight die crack at first T of STATES.

**2** *Obv.* Date not as high, also thinner.

*Rev.* Medium lettering. Die crack starting at F of HALF, and runs through A of AMERICA, and another crack runs across field through A and M of value.

**3** *Obv.* Large, not so high date. Figures 8 and 4 close together. Flaw between 10th and 11th stars.

*Rev.* Heavy lettering.

**4** *Obv.* Similar to No. 3, but lighter numerals.

*Rev.* Badly cracked die of No. 2.

**5** *Obv.* Slender, rather open date, not high. Stars not heavy. Die crack through E of LIBERTY in shield to edge.

*Rev.* Thin lettering.

**5A** *Obv.* Die crack enlarged, running now to right edge.

*Rev.* Die of No. 5.

**6** *Obv.* Compact, low date. 1 and 8 recut at bottom. Flaw shows between 10th and 11th stars.

*Rev.* Thin lettering.

**1844**

**1** *Obv.* Heavy, compact date. Tall and 8 high. Medium stars.

*Rev.* Medium lettering. Proof.

**2** *Obv.* Heavy, perfect date, medium spaced. The last 4 a trifle low. Medium stars.

*Rev.* Medium lettering. Proof.

**3** *Obv.* Heavy, perfect date, medium spaced. The 1 lower than other figures, but the 1 at the top, and the 8 at the bottom show double impressions due to the fact that when the date was punched in a slight slipping occurred which was later rectified by smoothing off the surface of the die.

*Rev.* Medium lettering.

**3A** *Obv.* Die of No. 3, but the imperfections at date barely show.

*Rev.* A slight die break occurs at F in OF.

### O MINT

**1** *Obv.* Rather high and even date.

*Rev.* Large o. Thin lettering.

**2** *Obv.* Die of No. 1.

*Rev.* Small round o, low. *Rev.* upset.

### 1845

**1** *Obv.* Small, high date. The 1 tall and spaced, the 845 almost touch, the 4 is low and the 5 is high.

*Rev.* Medium lettering.

**1A** *Obv.* Die of No. 1.

*Rev.* Die of No. 1. A die crack runs through u into wreath. Proof.

**2** *Obv.* Die of No. 1.

*Rev.* Heavy lettering. The ICA is close to edge.

**3** *Obv.* Heavy, compact date, well centered, the 5 high. Die cracks at 1st and 2nd, 3rd and 4th stars.

*Rev.* Medium lettering.

**3A** *Obv.* The die crack now extends through base into date.

*Rev.* The die of No. 3.

**4** *Obv.* Date medium spaced. The 84 are lower than the 1 and 5.

*Rev.* Heavy lettering. Defect in background back of ATE in STATES, and last A in AMERICA.

**5** *Obv.* Small date, medium spaced. All numerals show they have been twice punched, and the 5 looks as if it had been made over from a 3.

*Rev.* Heavy lettering.

**6** *Obv.* Heavy, low date. The 1 very close to milling, the 5 high. The 5th, 8th, 9th, 10th, 11th, and 12th stars show defects around them.

*Rev.* Medium lettering.

### 1846

**1** *Obv.* 1 high. Large date, 4 and 6 close. The openings in the figures are partly filled up.

*Rev.* Heavy lettering.

### 1847

**1** *Obv.* Heavy date. All numerals touch base, bottoms of 1 and 7 near edge, 1 and 8 recut. Defects show at 1st, 2nd, 5th, and 10th stars.

*Rev.* Heavy lettering.

**2** *Obv.* Thin date. All numerals touch base but not both points of the 7. The 4 and 7 are close. Defects show around every star.

*Rev.* Heavy lettering. Proof.

**3** *Obv.* Medium date. 1 and 8 touch base. Date not close to edge. Defect shows only between 10th and 11th stars.

*Rev.* Heavy lettering.

**4** *Obv.* High date. 1 heavier than on other varieties. 4 and 7 spaced. Defect between 5th and 6th star. There is a slight die crack at 184 of date, and at 7th star to head.

*Rev.* Heavy lettering.

**5** *Obv.* Die of No. 4, showing die break more extended.

*Rev.* Medium lettering.

### 1848

**1** *Obv.* Large date, overruns base. Large stars. 8th to 12th stars defective.

*Rev.* Heavy lettering.

**2** *Obv.* Compact, small, high date. All figures touch base; all stars defective.

*Rev.* Medium lettering.

**2A** Same as above but the reverse is upset.

**3** *Obv.* Tall, compact, high date. All numerals touch base. 5th, 7th, 8th, and 10th stars defective.

*Rev.* Medium lettering.

**4** *Obv.* Small open date. All numerals touch. Defects show between 5th and 6th stars, and 10th and 11th stars.

*Rev.* Medium lettering. Upset reverse, proof.

**5** *Obv.* Very similar to above but stars show no defects and the denticulations at milling are double struck.

*Rev.* Heavy lettering. Die cracks at ME of DIME to C of AMERICA, also E of UNITED to H of HALF.

**6** *Obv.* Similar to No. 4, but the numerals are lighter and do not lap over the base.

*Rev.* From another die. A bad crack through A of STATES through wreath to bottom branching off through T and N of UNITED.

**7** *Obv.* Small, compact date. 184 very close to base, last 8 clear.

*Rev.* Medium lettering.

**7A** *Obv.* Die of No. 7.

*Rev.* Die of No. 7. A crack, N of UNITED, through H of HALF and E of STATES.

### O MINT

**1** *Obv.* Large high date. Second 8 merges. Large stars; several defective. The end of shield points to the top of 1.

*Rev.* Medium lettering. Large o.

**2** *Obv.* Similar. The end of shield points to the left part of 1.

*Rev.* Slender lettering. Small o.

### 1849

**1** *Obv.* Small, rather compact date, high. 184 touch base. Heavy numerals and stars. Slight

defects show at 1st, 2nd, 4th, 5th, 8th, 10th, 11th, and 12th stars.

*Rev.* Heavy lettering.

**2** *Obv.* Numerals rather slender. Open date, not so high. Does not touch base. The 9 shows a defect in the opening. Defect between 10th and 11th stars.

*Rev.* Medium lettering. Die cracks at N of UNITED, D of DIME, H of HALF, T of STATES, and bow of wreath.

**3** *Obv.* Perfect, compact date; short numerals; slightly high but do not touch.

*Rev.* Heavy lettering.

**3A** *Obv.* Die of No. 3.

*Rev.* There is a slight die break at left stem of wreath.

**4** *Obv.* Compact, small numerals, well placed. The 9 shows it has been stamped over an 8, as both loops of the latter figure show slightly at the right.

*Rev.* Die of No. 3, but a die break runs from first s of STATES through wreath to bottom edge.

**5** *Obv.* Almost identical with No. 4, but very few defects around the stars and only the lower loop of the 8 shows under the 9.

*Rev.* Medium weight lettering, perfect dies.

**6** *Obv.* Open not high date, with slender numerals.

*Rev.* Medium lettering. Slight die breaks at F, R and right stem of wreath.



**7** *Obv.* Open low date. Short, rather heavy numerals. The 9 low.

*Rev.* Heavy lettering.

**8** *Obv.* Small open date, rather low.

*Rev.* Rather heavy lettering, all spaced. Proof.

**8A** *Obv.* Die of No. 8, but die crack at last three stars running into foot of Liberty.

*Rev.* The cracked die of No. 6.

### O MINT

**1** *Obv.* Small, open, medium date. Die crack, three lowest stars at left, and at 8 of date.

*Rev.* Medium lettering. Large o. Die crack at T in UNITED, and M of AMERICA.

**2** *Obv.* Heavy date. Imperfections at 5th, 9th, 10th, 11th, 12th, and 13th stars.

*Rev.* Perfect die of No. 1.

### 1850

**1** *Obv.* Numerals touch base.

*Rev.* Medium lettering.

**2** *Obv.* The 18 and 5 touch base.

*Rev.* Medium lettering. Proof.

**3** *Obv.* 1 touches base. 850 are close.

*Rev.* Medium lettering.

**4** *Obv.* Date close to base. The 1 almost touches.

*Rev.* Rather slender lettering.

**5** *Obv.* Date does not touch base. Compass point shows.

*Rev.* Medium lettering. Cracks starting at E and D of UNITED, run into wreath.

## O MINT

- 1** *Obv.* Open date, clear of base.  
*Rev.* Heavy lettering. Large o; high.
- 1A** *Obv.* Die of No. 1, but a faint break shows at third star.  
*Rev.* Die of No. 1, but a break shows between F of OF and A of AMERICA.
- 2** *Obv.* Medium open date, clear of base. Defects between 10th and 11th stars, and a faint die crack runs through nearly all of the stars.  
*Rev.* Heavy lettering. Round, fat o.
- 3** *Obv.* Compact, low date, not close to base.  
*Rev.* Medium lettering. Medium o, near wreath.
- 4** *Obv.* Small, rather low date. Not close to base.  
*Rev.* Slender lettering. Small o. Small pits in the die about UNITED STATES.

## 1851

- 1** *Obv.* Open, high date, all numerals touch base. Defects near 5th, 8th, 10th, and 12th stars.  
*Rev.* Medium lettering. Proof.
- 1A** *Obv.* Die of No. 1.  
*Rev.* Die of No. 1. Crack at UN.
- 2** *Obv.* Open, low date. Defects near 5th, 8th, 10th, and 12th stars.  
*Rev.* Medium lettering. Die break through M of AMERICA.

## O MINT

- 1** *Obv.* Numerals 51 touch base. Faint die break through last five stars.

*Rev.* Slender letters. Large o; crack from ES in STATES through OF and AMERIC.

**2** *Obv.* Numerals very close to base; all touch but the 8. Die flaw over cap and 9th and 10th stars.

*Rev.* Heavy letters. Large o.

### 1852

**1** *Obv.* High, compact date. Defect between 10th and 11th stars.

*Rev.* Medium letters. A die imperfection extends from A of STATES to O of OF.

**2** *Obv.* Open date, high but not touching. Flaws at 8th, 10th, 11th, and 12th stars.

*Rev.* Medium lettering. Flaws in background at T of UNITED, TE of STATES and R of AMERICA.

**3** *Obv.* Rather compact date; high. The 1 heavy. Flaw between 10th and 11th stars.

*Rev.* Rather slender lettering. Proof.

**3A** *Obv.* Die of No. 3.

*Rev.* Die of No. 3, but a die crack runs through RI of AMERICA.

**4** *Obv.* Open date, high. The 1 light. A faint die crack through first five stars.

*Rev.* Medium lettering. Die breaks through top of UNITED, and through both stems of wreath.

### O MINT

**1** *Obv.* Medium, rather open date.

*Rev.* Rather heavy lettering. AME touch, and E of DIME touches berry. Medium o, low.

**1853**

During this year a change was made in the weight of the silver coins, the half dimes were reduced from 20.8 grains to 19.2 grains. To distinguish those struck under the new law, arrow-heads were added to each side of the date. This practice was carried on for three years and then dropped.

*No Arrow-heads*

**1** *Obv.* Rather large, open date; heavy numerals. Date does not touch base.

*Rev.* Medium lettering. Faint die breaks shows at top of UNI of UNITED and MER of AMERICA.

**1A** *Obv.* Die of No. 1, but a faint die break runs through bottom of the date.

*Rev.* Die of No. 1, but the die crack shows plainer.

*With Arrow-heads*

**2** *Obv.* Date high. 1 touches, 8 very close. There is a slight defect at bottom of the 1 and top of the 8. Numerals medium and rather close. Small arrows close to numerals, and both touch base. Defects around 10th, 11th and 12th stars. Some specimens show a slight imperfection at right center of 1.

*Rev.* Medium lettering.

**2A** *Obv.* Die of No. 1, but the defects do not show as clearly about the stars, and the flaw below base of the 1 has disappeared.

*Rev.* Die of No. 1.

**3** *Obv.* Date high, the 1 only touches base. Thin base to 1. Tall, slender, spaced numerals. Small arrows, close to numerals but do not touch base.

*Rev.* Thin lettering.

**4** *Obv.* Open, medium date, 1 high and with a thin base. Small arrows close to numerals, and both touch base.

*Rev.* Medium lettering. There is a flaw in the field between bow-knot and wreath at right.

**4A** *Obv.* Die of No. 4, but die crack runs from 3 through arrow to base.

*Rev.* Die of No. 4.

**4B** *Obv.* Die of No. 4.

*Rev.* Die of No. 4, but there is a die break between A and T of STATES, and at left stem of wreath.

**5** *Obv.* Die of No. 4.

*Rev.* From another but similar die to No. 4. Heavy lettering. A flaw in the background above bow-knot at right.

**6** *Obv.* Die almost identical to No. 4, but a die break shows on the 11th and 12th stars.

*Rev.* Die similar to No. 4, but a die break at right of second T and at final S in STATES.

**7** *Obv.* Die almost identical to No. 4, but a die break runs from 5 to edge.

*Rev.* Die almost identical to No. 4, but a die break runs from left top of second T and from final S in STATES.

**8** *Obv.* Date heavy, high. Left hand arrow touches base; right hand does not.

*Rev.* Medium lettering. Die crack at UNI of UNITED.

**9** *Obv.* High date. 1 and 3 slightly heavy. Right arrow smaller. Both touch base; the left one overlaps.

*Rev.* Medium lettering.

**9A** *Obv.* Die of No. 9.

*Rev.* Cracks at first T and between E and S in STATES, and right hand stem.

**10** *Obv.* Thin, open date, medium placed. Base of 1 thin. Right hand arrow high, left hand arrow lower.

*Rev.* Rather light lettering. Die cracks at right stem and UNI of UNITED, and between F and A.

**11** *Obv.* Rather small, open, low date. Left arrow touches base; right one almost touches.

*Rev.* Medium lettering.

**12** *Obv.* Medium, open, low date. Medium arrows, left one not so high, close to 1 and to the milling; right one slightly larger, low and close to numeral and milling.

*Rev.* Die similar to No. 4. Lettering a trifle thinner.

## O MINT

### *Without Arrow-heads*

**1** *Obv.* No arrows at date. Rather large, open date. Slender, tall numerals. 1 touches base, 8 very close.

*Rev.* Rather slender lettering. Large o, slightly low.

*With Arrow-heads*

**2** *Obv.* Medium, open, rather high date. 1 almost touches base, 3 low. Small arrows; both high and not close to numerals. Crack from base to edge back of 3.

*Rev.* Rather heavy lettering. Crack at second s of STATES. Medium o, high.

**3** *Obv.* Medium, open, thin date. Not low but not close to base. Small arrows; left one touches base, right one nearly does.

*Rev.* Heavy lettering. Large o, near right bow.

**4** *Obv.* Similar to No. 3, but 1 larger and heavier. Arrows a trifle closer.

*Rev.* Die of No. 3.

**5** *Obv.* Rather large, open date, high but not touching. Both arrows just touch base and are close to numerals. Defect under righthand arrow.

*Rev.* Rather slender lettering. Large o, low, nearer left bow.

**1854**

**1** *Obv.* High wide date. All the tops of the numerals merge with the base. Right arrow touches crosslet of 4 and the milling. Left arrow is clear and the shaft is half way down the standard of the 1.

*Rev.* Heavy lettering. Die crack at u of UNITED to edge.

**2** *Obv.* Open, high date, the numerals touch the base. Left arrow high, close to point of 1 and touches milling. Right one is close to base and milling, the shaft is higher than in No. 1.

*Rev.* Medium lettering; perfect dies. Proof.

**2A** *Obv.* Die of No. 2, but a die crack runs from base through 185 of date.

*Rev.* Die of No. 2, but crack at left stem to edge.

**3** *Obv.* Rather compact, high date, quite similar to No. 2, but the 1 and 8 closer. The right arrow is the larger and is close to the 4 and touches the milling. The loop of the 5 almost closed and the 5 and 4 are closer to one another. The left arrow touches the point of the 1 and the milling, and is close to the base.

*Rev.* Rather heavy lettering. A slight die defect between UN of UNITED.

**3A** *Obv.* Same as No. 3, but the tip of upper serif of the 1 does not show.

*Rev.* Die of No. 3 but crack at first A in AMERICA.

**4** *Obv.* Open rather high slender date, the 8 a trifle more slanting, the 5 touches base. Small arrows, both touch milling, the left, the smaller, is close to the short serif of the 1 but is clear of the base. Right arrow is close to 4 and the base. The loop of the 5 is open.

*Rev.* Medium lettering.

**4A** *Obv.* Same as No. 4.

*Rev.* Same as No. 4, but has die cracks at left stem to edge and C of AMERICA to edge.

**5** *Obv.* Small open low date. Open loop 5. Small arrows, the left one rather high but not close to 1 or base though it touches the milling. Right



arrow clear but close to milling. There is a die fault in the field to right of Liberty.

*Rev.* Medium lettering.

**6** *Obv.* Smallest arrows and small date and slender stars. Struck from worn die.

*Rev.* Rather heavy lettering.

### O MINT

**1** *Obv.* High date. All numerals and right arrow touch base. Left arrow smaller and close. The die has been very badly scratched and fine lines show all over the figure and shield.

*Rev.* Heavy lettering. o large and slightly low.

**2** *Obv.* Medium, even numerals. 1, 8 and 5 touch base. Small arrows close to base and numerals.

*Rev.* Die of No. 1. Cracks at T of UNITED and between ME of AMERICA.

**3** *Obv.* Tall, even numerals. 1, 8 and 5 touch base. Small arrows, well placed.

*Rev.* Rather slender lettering. o high.

**4** *Obv.* High date. 1 and 8 touch base. Large arrows, high and close to numerals; right one close to base. Both arrow points touch milling.

*Rev.* Rather heavy lettering. o close to DIME.

### 1855

**1** *Obv.* Compact, medium, low date. Crack at top of 55. Large arrows merge in base, touch milling and close to numerals.

*Rev.* Rather slender lettering.

**2** *Obv.* Medium, low date, not quite as compact. A flaw at base of 1. Loop of second 5 open. Large arrows merge a little more on base; close to numerals but not close to milling.

*Rev.* Rather slender lettering; slightly heavier than that of No. 1.

**3** *Obv.* Very similar to No. 1, but a die crack runs from between second and third star to arm and from knee to last star. Arrows nearly touch milling.

*Rev.* Rather slender lettering.

**4** *Obv.* Similar but arrow point not so near the 1.

*Rev.* Medium lettering. Crack runs from edge through N of UNITED, wreath, M of AMERICA to edge.

**5** *Obv.* Similar to No. 1, but left arrow shaft not so low or close to the 1. Defect through upper part of 855 of date.

*Rev.* Heavy lettering. The D and E of DIME are close to berries. Crack at R of AMERICA.

**6** *Obv.* Open, medium, low date. Large arrows; both run into base and are close to milling.

*Rev.* Medium lettering. Proof.

## O MINT

**1** *Obv.* Open, medium date. Large arrows, high, almost touch milling and close to numerals. Proofs of this are known.

*Rev.* Slender lettering. Thin o, rather low.

**1A** *Obv.* Same as No. 1, but stars and Liberty cap on right are connected by crack. The die is also badly rusted.

**1856**

*No Arrow-heads*

**1** *Obv.* Small, heavy, compact, high date. Curved top to 5, 6 coarse, 185 especially compact. Tip of shield points to 1. A peculiarity of the coins of this date is that the denticulations of the milling are not well struck up.

*Rev.* Medium lettering.

**2** *Obv.* Medium, rather high date. 185 compact. Straight top to 5, 6 coarse. Tip of shield points to left of 1.

*Rev.* Medium lettering. Proof.

**3** *Obv.* Similar to above but shield points to left part of 1. Curved top to 5, 6 coarse.

*Rev.* Similar to No. 1.

**3A** *Obv.* Die of No. 3, but flaw at milling at ninth star.

*Rev.* Die of No. 3.

**4** *Obv.* Open, medium, high date. 1 and 8 heavy. Curved top to open loop to 5, 6 perfect.

*Rev.* Rather slender lettering.

**5** *Obv.* Open, medium, rather low date. Curved top to 5, 6 perfect.

*Rev.* Rather slender lettering.

**6** *Obv.* Low, open date, running slightly uphill. Curved top to 5, 6 perfect.

*Rev.* Slender lettering.

**7** *Obv.* Similar to No. 5, but heavy date. Curved top to 5, 6 coarse. Flaw between 10th and 11th stars.

*Rev.* Slender lettering.

**8** *Obv.* Open, rather even, heavy, low date. Loop of 5 closed. 6 coarse.

*Rev.* Medium lettering.

## O MINT

**1** *Obv.* Small, irregular, compact, high date; 1 and 6 low; 85 high and close, 5 and 6 heavy.

*Rev.* Medium lettering. Medium o; slightly low.

**2** *Obv.* Open, even, well placed date. 1 low. A faint die break runs through the right hand stars. Loop of 5 closed.

*Rev.* Medium lettering. Medium o. Slightly high.

**3** *Obv.* Medium date, 1 low, open loop 5.

*Rev.* Die crack at UN in UNITED.

**4** *Obv.* Medium placed date, 1 and 8 low. Cracks at 1 to milling, toe to milling and forehead to milling.

*Rev.* Die of No. 2.

**5** *Obv.* Close date, loop of 5 closed.

*Rev.* Small o, medium lettering. Flaw between UN.

## 1857

Early in 1857 the hub, having become badly worn, was retouched. The most noticeable differ-

ences are in the drapery between the figure of Liberty and the flagpole, and a dent on the inside point of the third star. The coins struck from dies before the changes were made, are No. 1, and Nos. 1, 2 and 3 of the New Orleans mint.

**1** *Obv.* High, open date, 1 high, 7 low. Loop of 5 closed; defect between 11th and 12th stars.

*Rev.* Medium lettering.

**2** *Obv.* Medium, high, numerals away from edge, the 1 nearest the base, open date, thin lettering. Loop of 5 open.

*Rev.* Rather slender lettering.

**3** *Obv.* Open, medium, high date; well placed; heavy figures; loop of 5 closed, the 7 nearest the base.

*Rev.* Medium lettering. Proof.

**4** *Obv.* Open, medium, date, well centered; 7 low. The loop of the 5 is about closed.

*Rev.* Medium lettering. Perfect die.

**4A** *Obv.* Die of No. 4.

*Rev.* Die of No. 4, but die flaw from wreath to C of AMERICA.

**5** *Obv.* Similar to No. 4, but date a little more extended. The loop of the 5 is open and a flaw shows from left of 1 to edge.

*Rev.* Medium lettering. There is a defect in the second s of STATES, and through E of AMERICA to edge.

**6** *Obv.* Almost identical with No. 5. The loop of the 5 is open.

*Rev.* Light lettering.

**7** *Obv.* Low, compact date; 1 near milling; the 7 well placed. Thick numerals.

*Rev.* Medium lettering.

**8** *Obv.* Low, open date. Loop of 5 nearly closed.

*Rev.* Rather slender lettering.

**9** *Obv.* Close even well placed date. The die is badly worn.

*Rev.* Light lettering.

O MINT

**1** *Obv.* Rather high, compact date; 1 rather high, almost touches; 7 low. A faint die break runs through the first five stars at left, and a line runs from rock to base at left.

*Rev.* Slender lettering. Medium o, slightly low.

**2** *Obv.* Die of No. 1.

*Rev.* Slender lettering. Medium o, low.

**3** *Obv.* Open, rather high date; 1 high but clear; 5 has open loop.

*Rev.* Rather slender lettering. Large o, low.

**3A** *Obv.* Die of No. 3, but a die crack runs through the stars at right.

*Rev.* Die of No. 3.

**4** *Obv.* Open date, heavy, not high. The loop of 5 is closed. Retouched die.

*Rev.* Medium lettering. Medium o, not so low.

**5** *Obv.* Small open well placed date. Open loop 5, the 7 shorter.

*Rev.* Slender lettering. Medium o rather low.

**6** *Obv.* Medium well placed open date, not quite as high as No. 2. Loop of 5 almost closed.

*Rev.* Medium o, well placed.

### 1858

**1** *Obv.* Small compact high date. Tip of shield points to left end of 1. Loop of 5 almost closed. The second 8 low. Pendant on edge of skirt over-right part of 5.

*Rev.* Medium lettering.

**2** *Obv.* Similar to No. 1, but tip of shield points to right of 1. Skirt-pendant over center of 5.

*Rev.* A bad die flaw in STA of STATES and thence under TES into OF. Flaw at right stem.

**3** *Obv.* Date slightly more open and slightly lower. Tip of shield points to left end of 1. Skirt-pendant to right of 5, the loop of which is open.

*Rev.* Medium lettering, probably die of No. 2 before flaws at lettering developed.

**4** *Obv.* Date not so heavy and a trifle more extended than on No. 1, and a trifle lower. Shield points to left tip of 1, skirt-pendant over right part of 5.

*Rev.* Medium lettering.

**4A** *Obv.* Die of No. 4.

*Rev.* Die of No. 4, but a die break from second T of STATES to edge. Proof.

**5** *Obv.* Medium open low date. The shield points to left of 1, skirt-pendant over right center of 5. Die cracks through first three and last three stars.

*Rev.* Medium lettering.

**6** *Obv.* Low, open date, open loop 5.

*Rev.* Medium lettering.

**7** *Obv.* Low, open date, lower than No. 6. The loop of the 5 nearly closed.

*Rev.* Rather slender lettering.

**8** *Obv.* Low date, the last 8 lower than the other figures. The 1 and upper part of the 5 well struck up, the two 8's not so well struck.

*Rev.* Rather slender lettering. Proof.

### O MINT

**1** *Obv.* Medium, high, open date; 8 low. A die crack extends from Liberty's toe to edge.

*Rev.* Medium lettering. Medium o; low.

**1A** *Obv.* Die of No. 1.

*Rev.* Die of No. 1, but die breaks show at second T of STATES, and I of AMERICA.

**2** *Obv.* Close, medium placed date.

*Rev.* Medium lettering. Roundish o; very low and to right.

**3** *Obv.* Die of No. 2.

*Rev.* Medium lettering, break at C of AMERICA, extending to leaf, stem and ribbon. o low and to the left.

**4** *Obv.* Very low, compact date.

*Rev.* Similar to No. 1; die break between s of STATES and o of OF.

### 1859

During the year a new obverse hub was made, but used only on those coins struck at the Phila-



delphia mint. The dies for the New Orleans mint were made from the old hub. The new hub is of slightly lower relief. The stars are sharper pointed and are hollow in the center. The face, hair and drapery show marked differences, the arms are slimmer, the Liberty cap smaller, the word LIBERTY on shield larger, the bottom of the base less irregular and projects beyond the foot of Liberty. No change is noted on the reverse.

**1** *Obv.* High, open date. The bottom of the 1 and 9 show a double impress.

*Rev.* Medium lettering. Proof.

**2** *Obv.* Low, open date.

*Rev.* Rather slender lettering.

### O MINT

**1** *Obv.* Open date, well placed.

*Rev.* Heavy lettering. H of HALF touches wreath. Large o, low and to the left of center. Die crack through ME of AMERICA.

**2** *Obv.* Die of No. 1.

*Rev.* Heavy lettering. H of HALF touches wreath. Large o, medium placed, slightly to the right of center.

**3** *Obv.* Die of No. 1.

*Rev.* Rather slender lettering. H of HALF does not touch wreath. Cracks at I in AMERICA, and right stem of wreath. o to the right of center.

## TRANSITIONAL PATTERNS

**1859**

1. *Obv.* Design of 1859, date high.

*Rev.* New design. For description see under regular series of 1860.

**1860**

1 *Obv.* Design of 1859, small medium placed date.

*Rev.* The new design.

Neither of these two coins bear the legend UNITED STATES OF AMERICA.

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**1860**

The final type of the half-dime was introduced in this year. The seated figure is from the same model as used before 1859, but a trifle smaller. In place of the stars, the reverse inscription, UNITED STATES OF AMERICA, has been transferred to the obverse.

On the reverse the wreath fills much more of the field, occupying the space where the legend formerly was, and is composed of oak leaves and one acorn, together with corn on the right and cotton and tobacco on the left. Both sprays are fastened by a ribbon bow-knot. The value HALF DIME is in more condensed lettering. The mint mark appears below the wreath until 1871; during that year and part of 1872, the mint letter is within

the wreath, and then again it is restored to its position under the wreath.

- 1 *Obv.* Slender numerals; date high.  
*Rev.* Both ends of the ribbon touch wreath.
- 2 *Obv.* Slight numerals; medium high date.  
*Rev.* Both ends of ribbon touch.
- 3 *Obv.* Heavy numerals; low date.  
*Rev.* The right end of the ribbon is clear.  
Proof.

#### O MINT

- 1 *Obv.* Open, medium date.  
*Rev.* Low, thin o. Left end of ribbon is clear.
- 2 *Obv.* Open, medium date. Die imperfections between figure and flagpole.  
*Rev.* Low, thick, small o. Left end of ribbon is close.
- 3 *Obv.* Compact, low date.  
*Rev.* High, medium o. Both ends of ribbon clear. Crack at right end to leaf.
- 4 *Obv.* Compact, low date.  
*Rev.* Small o; higher. Right end of ribbon is clear.
- 5 *Obv.* Small, low date.  
*Rev.* Small, high o; very close to knot. Both ends of ribbon touch.

#### 1861

- 1 *Obv.* Open, well placed date.  
*Rev.* The right end of ribbon is clear. Proof.
- 2 *Obv.* Similar to No. 1, but flaw under arm holding pole.

*Rev.* Wreath is recut at left. Right end of ribbon is close.

**3** *Obv.* Compact, low date.

*Rev.* Right end of ribbon is clear.

**1862**

**1** *Obv.* High, open date. Slight flaw from head to cap and at TY of LIBERTY on shield.

*Rev.* Both ends of ribbon touch.

**2** *Obv.* Medium high date, slight flaw on breast below hair.

*Rev.* Both ends of ribbon are clear, except on heavily struck pieces. Proof.

**3** *Obv.* Thin irregular spaced date. Upper part of second s in STATES slightly filled in.

*Rev.* Right end of ribbon is clear. Proof.

**4** *Obv.* Open date, starting low and running upward.

*Rev.* Both ends of ribbon touch.

**5** *Obv.* Low, open date. A faint flaw runs from ear into neck.

*Rev.* Right end of ribbon is clear. Defect in M.

**6** *Obv.* More compact, low date.

*Rev.* Both ends of ribbon touch. A crack runs from edge to top leaf at left.

**1863**

**1** *Obv.* Date high; the 1 is double punched.

*Rev.* Both ends of ribbon touch. Proof.

**S MINT**

**1** *Obv.* Low date.

*Rev.* The s well placed. Right end of ribbon is clear.

### 1864

1 *Obv.* Compact, low date, 4 bold.

*Rev.* Right end of ribbon is clear. Proof.

### COPPER PATTERN

*Obv.* High compact date. Upper part of d in UNITED defective as is shown in numerous obverses from 1871 on.

*Rev.* Ribbon ends touch.

### S MINT

1 *Obv.* Well placed, open date, 4 bold.

*Rev.* Medium s well placed. Both ends of ribbon touch.

### 1865

1 *Obv.* Medium, placed date. There is a flaw in upper left side of 8.

*Rev.* Both ends of ribbons are clear. Proof.

### S MINT

1 *Obv.* Compact, high date.

*Rev.* Rather small s; low. Right end of ribbon is clear.

2 *Obv.* More open date; not quite as high.

*Rev.* s well placed. Crack at left ribbon, near s, to edge, and at the lower end of right end of ribbon. Right end does not touch.

**1866**

- 1** *Obv.* Low date.  
*Rev.* Both ends of ribbon are clear. Proof.

**S MINT**

- 1** *Obv.* Open, well placed date.  
*Rev.* Small "chunky" s; rather high. Right end of ribbon is clear.

**1867**

- 1** *Obv.* Open, high date.  
*Rev.* Both ends of ribbon are clear. Proof.  
**2** *Obv.* Open, low date and more to left.  
*Rev.* Both ends of ribbon touch. Proof.

**S MINT**

- 1** *Obv.* Open, high date.  
*Rev.* Medium s; rather well placed. Both ends of ribbon are clear. A small crack near right end.

**1868**

- 1** *Obv.* Open, high date.  
*Rev.* Right end of ribbon clear. Proof.  
**2** *Obv.* Open, medium, high date, a trifle more extended.  
*Rev.* Right end of ribbon clear.

**S MINT**

- 1** *Obv.* Open, medium, high date.  
*Rev.* Rather small s; slightly high. Right end of ribbon is clear.

**1A** Same as No. 1, but the reverse has crack at ribbon, each side of the s.

**1B** Same as No. 1A but with a bad die crack at 8 of date.

### 1869

- 1** *Obv.* High, open date.  
*Rev.* Right end of ribbon is just clear. Proof.
- 2** *Obv.* The date more compact and not so high.  
*Rev.* Both ends of ribbon touch. Proof.
- 3** *Obv.* Date a trifle low; 1 and 8 touch.  
*Rev.* Both ends of ribbon touch.
- 4** *Obv.* Date more open and low.  
*Rev.* Right end of ribbon is clear.

### S MINT

- 1** *Obv.* High date; 1 and 8 touch.  
*Rev.* s rather high and open. Both ends of ribbon touch.
- 2** *Obv.* Date low.  
*Rev.* s higher and compact. Both ends of ribbon touch.

### 1870

- 1** *Obv.* Large, open, high date.  
*Rev.* Right end of ribbon is clear.
- 2** *Obv.* Rather open, high date; not as open as No. 1.  
*Rev.* Right end of ribbon is clear. Proof.
- 3** *Obv.* Rather open, high, medium date.  
*Rev.* Right end of ribbon just touches.
- 4** *Obv.* Open, low date.  
*Rev.* Right end of ribbon is clear.

- 5**   *Obv.*   Rather compact, low date.  
          *Rev.*   Both ends of ribbon touch.
- 6**   *Obv.*   Low date.  
          *Rev.*   Right end of ribbon is clear.

PATTERN

Silver. Adams-Woodin 1038.

*Obv.*   Liberty seated facing the left. Inscription UNITED STATES—OF AMERICA. 1870 beneath the base.

*Rev.*   At top, STANDARD; within a wreath, 5 over the curved word CENTS.

The same design in copper. A.-W. 1041.

1871

- 1**   *Obv.*   Large high, compact date; 1 and 8 very close, 7 and 1 touch. Defective D in UNITED.  
          *Rev.*   Right end of ribbon almost touches.  
          Proof.
- 2**   *Obv.*   High, open date. Defective D in UNITED.  
          *Rev.*   Right end of ribbon is clear.
- 3**   *Obv.*   Large, compact date; not so high; the second 1 is near the edge. Perfect D.  
          *Rev.*   Right end of ribbon is clear.
- 4**   *Obv.*   Low, compact date. Defective D in UNITED.  
          *Rev.*   Heavy HALF DIME. Both ends of ribbon touch.
- 5**   *Obv.*   Tall low date, both 1's close to edge. Defective D in UNITED.  
          *Rev.*   Ribbon ends touch.



## S MINT

- 1** *Obv.* Tall, compact date; slightly low.  
*Rev.* Small s high in wreath. Both ends of ribbon are clear.

## 1872

The D in UNITED from now on is defective.

- 1** *Obv.* Small, compact, high date.  
*Rev.* Both ends of ribbon touch.
- 2** *Obv.* Medium, high date; the 1 and 8 touch; the 2 is low.  
*Rev.* Right end of ribbon is clear. Proof.
- 3** *Obv.* The date more open and slightly lower. The 1 and 8 do not touch.  
*Rev.* Both ends of ribbon touch.
- 4** *Obv.* Low, open date.  
*Rev.* Right end of ribbon just touches. Proof.
- 5** *Obv.* Open rather low date, the 1 and 8 do not touch.  
*Rev.* Ribbon ends are clear.

## S MINT

- 1** *Obv.* Large, medium placed.  
*Rev.* Large s inside wreath and high. Right end of ribbon almost touches.
- 2** *Obv.* Medium placed date; more extended.  
*Rev.* Small s inside wreath and lower than in No. 1. Both ends of ribbon are clear.
- 3** *Obv.* Medium, high date.  
*Rev.* Large s below knot. Both ends of ribbon are clear.

**4** *Obv.* Small, low, compact date.

*Rev.* Small s below knot. Both ends of ribbon are clear. Die-break from right ribbon to edge.

**1873**

**1** *Obv.* Medium, high date; the 1 and 8 about touch. Defects to left of 1, above 8, and from 7 to base of figure.

*Rev.* Both ends of ribbon touch.

**2** *Obv.* Open, low date.

*Rev.* Right end of ribbon is just clear. Proof.

**S MINT**

**1** *Obv.* Heavy, even, date; well placed.

*Rev.* Large s rather close to knot. Both ends of ribbon about touch.

**TOKENS**

The following pieces are included as they illustrate the manufacture by private sources of tokens inscribed **HALF DIME**.

*Obv.* In center, scales; around, **GOOD AT NICHOLSON'S \***.

*Rev.* Within wreath, **HALF DIME**; above, **STATE OF MISSOURI**.

German silver. Edge plain. Size 15 mm.

*Obv.* Within closed wreath, above and below six pointed stars, **BREAD**.

*Rev.* Within closed wreath, **HALF DIME**; above, **GOOD AT J. B. WILSON'S**; below, **FOR**.

White metal. Edge reeded. Size 15 mm.



PLATE 1



1792



1794-1



2, 3



1, 2



3A

# U. S. HALF DIMES



1794.4A



1794.4.1795.1, 10



1795.1



2



2, 3



3

## PLATE 2



1795.4



5A, 6

5, 7, 8, 9



6

7

## U. S. HALF DIMES



**1795-8**



**1796-1**



**1797-1**



PLATE 3



1797-2A



2A, 4



3, 4



3



1800-1A





## U. S. HALF DIMES



1800.2



1801.1B



1801.1



1802.1



PLATE 4



1803.1, 2



1, 3



2



3



1805.1



## U. S. HALF DIMES



**1829-1, 5, 6, 8**



**1**



**2, 11**



**2**



**3**



# PLATE 5



1829-4, 10



1, 5, 6, 8



4, 5



6



7



## U. S. HALF DIMES



**1795-8**



**1796-1**



**1797-1**



PLATE 3



1797-2A



2A, 4



3, 4



3



1800-1A



## U. S. HALF DIMES



**1800.2**



**1801.1B**



**1801.1**



**1802.1**





PLATE 4



1803.1, 2



1, 3



2



3



1805.1





## U. S. HALF DIMES



**1829-1, 5, 6, 8**



**1**



**2, 11**



**2**



**3**



PLATE 5



1829-4, 10



1, 5, 6, 8



4, 5



6



7



## U. S. HALF DIMES



**1829.8, 9**



**9, 12**



**10, 11**



**12A**



**1830.1**



PLATE 6



1830.2, 5



2



3, 8



3, 4



4, 6



5

## U. S. HALF DIMES



1830-6, 7



7A



8



9, 10



9



10

PLATE 7



1831-1, 3



1A



2, 6, 7



2



3, 4



4, 5

## U. S. HALF DIMES



1829.8, 9



9, 12



10, 11



12A



1830.1





PLATE 6



1830.2, 5



2



3, 8



3, 4



4, 6



5



## U. S. HALF DIMES



1830-6, 7



7A



8



9, 10



9



10

PLATE 7



1831-1, 3



1A



2, 6, 7



2



3, 4



4, 5

## U. S. HALF DIMES



1831.5A



6C



7



1832.1



PLATE 8



1832.(2), 6, 7



2



3, 4



3



4



5

## U. S. HALF DIMES



**1832-5A**



**6**



**7**



**8, 9**



**8B**



**9A**

PLATE 9



1833-1, 2, 5



1



2



3, 4



3



4B

# U. S. HALF DIMES



1833.1, 2, 5



5



6



7



PLATE 10



1834.1A, 3



1, 2



2



4



3, 4



## U. S. HALF DIMES



**1834-5**



**1835-1, 6**



**1**



**2, 4, 8, 9**



**2A**

PLATE 11



1835-3A



4, 5



6A



5



7

## U. S. HALF DIMES



**1832-5A**



**6**



**7**



**8, 9**



**8B**



**9A**

# PLATE 9



1833-1, 2, 5



1



2



3, 4



3



4B

## U. S. HALF DIMES



1833.1, 2, 5



5



6



7



PLATE 10



1834.1A, 3



1, 2



2



4



3, 4

## U. S. HALF DIMES



**1834-5**



**1835-1, 6**

**1**



**2, 4, 8, 9**

**2A**



PLATE 11



1835-3A



4, 5



6A



5



7



# U. S. HALF DIMES



1835.7



8



10



9A, 10



1836.1A, 5



1, 2

# PLATE 12



1836.2, 6



2



3



4



## U. S. HALF DIMES



**1834-5**



**1835-1, 6**

**1**



**2, 4, 8, 9**

**2A**

PLATE 11



1835-3A



4, 5



6A



5



7

## U. S. HALF DIMES



1835.7



8



10



9A, 10



1836.1A, 5



1, 2

PLATE 12



1836.2, 6



2



3



4



## U. S. HALF DIMES



**1836-5**



**6**



**1837-1**



**2**





# PLATE 13



1837-3A



3



1837-1



1, 5



2, 3



2, 4, 6



## U. S. HALF DIMES



1837.4A, 5



6A



1838.1, 2



1, 13



2, 4, 11



3

# PLATE 14



1838.3



4, 5



5, 6, 9



6, 7, 8



7, 12, 14



8

## U. S. HALF DIMES



1838-9



10



10



11



12



13, 14

PLATE 15



1838.0 Mint



1839-1



2

## U. S. HALF DIMES



1839.O-1



O-2B



O-3A



PLATE 16



1839.O-4A



O-5



O-6

## U. S. HALF DIMES



1840-1



1, 3



2



4





PLATE 17



1840.5



6



7A



## U. S. HALF DIMES



1840.O-1



O-2



O-3



PLATE 18



1840.O-4



O-5



1841-1

# U. S. HALF DIMES



1841.2



3



2, 3



O-1



O-1A, 2



O-2

PLATE 19



1841.O-3



O-4



1842.1, 2



1A

## U. S. HALF DIMES



1842-2A



3



4



PLATE 20



1842.O-1



O-2



O-3



## U. S. HALF DIMES



1843.1



1A



2



3.4



3

PLATE 21



1843.4



5A



6



## U. S. HALF DIMES



1844.1



2



3



3A

PLATE 22



1844.O-1, 2



O-1



O-2



1845.1, 2



1

## U. S. HALF DIMES



1845.2



3A



4



PLATE 23



1845.5



6



1846.1



## U. S. HALF DIMES



**1847.1**



**2**



**3**



**4**



**Heavy Lettering**



**Medium Lettering**

PLATE 24



1848.1



2



3



4, 6



5



7

## U. S. HALF DIMES



**1848 Heavy Lettering**



6



O-1



O-2



PLATE 25



1849.1



2



2



3



4



5



## U. S. HALF DIMES



**1849.6**



**7**



**8A**



**0-1**



**0-2**



**0-1**

PLATE 26



1850.1



2



3



4



5



4

## U. S. HALF DIMES



1849.6



7



8A



O-1



O-2



O-1

# PLATE 26



1850.1



2



3



4



5



4

## U. S. HALF DIMES



1850.O-1



O-2



O-3

PLATE 27



1850.O-4



1851.1A



2

## U. S. HALF DIMES



**1851.O-1**



**O-2**



**1852.1**



**2**

PLATE 28



1852.3



4



0-1



1853.1





## U. S. HALF DIMES



1853.2



3



4, 5

4A

PLATE 29



1853.5



6



7



## U. S. HALF DIMES



1853.8



9A



10



PLATE 30



1853.11



12



O-1



## U. S. HALF DIMES



1853.O-2



O-3



O-4



O-3, 4

PLATE 31



1853.O-5



1854.1



2A



# U. S. HALF DIMES



1854.3



3A



4



6



1854.O-1



PLATE 32



1854.O-2



O-3



O-4





## U. S. HALF DIMES



1853.2



3



4, 5

4A

PLATE 29



1853.5



6



7

## U. S. HALF DIMES



1853.8



9A



10



PLATE 30



1853.11



12



0-1



## U. S. HALF DIMES



1853.O-2



O-3



O-4



O-3, 4

PLATE 31



1853.O-5



1854.1



2A

## U. S. HALF DIMES



**1854.3**



**3A**



**4**



**6**



**1854.O-1**



PLATE 32



1854.O-2



O-3



O-4





## U. S. HALF DIMES



**1855.1**



**2**



**3**

PLATE 33



1855.4



5



6



## U. S. HALF DIMES



1853.8



9A



10



PLATE 30



1853.11



12



O-1

## U. S. HALF DIMES



1853.O-2



O-3



O-4



O-3, 4

PLATE 31



1853.O-5



1854.1



2A



## U. S. HALF DIMES



**1854.3**



**3A**



**4**



**6**



**1854.O-1**



PLATE 32



1854.O-2



O-3



O-4





## U. S. HALF DIMES



1855.1



2



3

PLATE 33



1855.4



5



6



## U. S. HALF DIMES



1855.O-1A



1856.1



2



PLATE 34



1856.3



4



5

## U. S. HALF DIMES



1856.6



7



8



PLATE 35



1856.O-1



O-2



O-3

## U. S. HALF DIMES



**1856.O-4**



**1857.1**



**2**



PLATE 36



1857.3



4



5





## U. S. HALF DIMES



1855.O-1A



1856.1



2



PLATE 34



1856.3



4



5

## U. S. HALF DIMES



1856.6



7



8



PLATE 35



1856.O-1



O-2



O-3

## U. S. HALF DIMES



**1856.O-4**



**1857.1**



**2**

PLATE 36



1857.3



4



5



## U. S. HALF DIMES



1857.6



7



8





PLATE 37



1857.O-1, 2



O-1



O-2



O-3A





## U. S. HALF DIMES



**1857.O-4**



**1858.1**



**2**



**3**



**4**

PLATE 38



1858.5



6



7



8



1858.O-1A



## U. S. HALF DIMES



**1856.O-4**



**1857.1**



**2**

PLATE 36



1857.3



4



5



## U. S. HALF DIMES



1857.6



7



8



PLATE 37



1857.O-1, 2



O-1



O-2



O-3A



## U. S. HALF DIMES



**1857.O-4**



**1858.1**



**2**



**3**



**4**



# PLATE 38



1858.5



6



7



8



1858.O-1A





## U. S. HALF DIMES



1858.O-2, 3



O-2



O-3



O-4



PLATE 39



1859.1



2



O-1, 2, 3



O-1



O-2



O-3

## U. S. HALF DIMES



**Pattern 1859**



**Pattern 1860**



**1860.1**

PLATE 40



1860.2



3



1860.O-1



O-2



## U. S. HALF DIMES



1860.O-3



O-4



O-5



PLATE 41



1861.1



2



3



2



1862.1



2

## U. S. HALF DIMES



**1862.3**



**4**



**5**



**6**



**1863.1**





PLATE 42



1863.S-1



1864.1



S-1





## U. S. HALF DIMES



**Pattern 1859**



**Pattern 1860**



**1860.1**

PLATE 40



1860.2



3



1860.O-1



O-2



## U. S. HALF DIMES



1860.O-3



O-4



O-5



PLATE 41



1861.1



2



3



2



1862.1



2

## U. S. HALF DIMES



**1862.3**



**4**



**5**



**6**



**1863.1**



PLATE 42



1863.S-1



1864.1



S-1



## U. S. HALF DIMES



1865.1



S-1



S-2





PLATE 43



1866.1



S-1



1867.1



2



## U. S. HALF DIMES



**1867.S-1**



**1868.1**



**2**



**S-1**



PLATE 44



1869.1



2



3



4



S-1



## U. S. HALF DIMES



**1869.S-2**



**1870.1**



**2**



**3**



**4**

PLATE 45



1870.5



6



1870 Pattern



1871.1



2

## U. S. HALF DIMES



1865.1



S-1



S-2



PLATE 43



1866.1



S-1



1867.1



2

## U. S. HALF DIMES



**1867.S-1**



**1868.1**



**2**



**S-1**





# PLATE 44



1869.1



2



3



4



S-1





## U. S. HALF DIMES



**1869.S-2**



**1870.1**



**2**



**3**



**4**

PLATE 45



1870.5



6



1870 Pattern



1871.1



2

## U. S. HALF DIMES



1871.3



4



S-1



1872.1



2

PLATE 46



1872.3



4



S-1



S-2



# U. S. HALF DIMES



1872.S-3



S-4



1873.1



2

PLATE 47



1873.S-1





Q  
9, 35-  
.779

# NUMISMATIC NOTES AND MONOGRAPHS

No. 49



## TWO ROMAN HOARDS FROM DURA-EUROPOS

BY

ALFRED R. BELLINGER

THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
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# TWO ROMAN HOARDS FROM DURA - EUROPOS

BY  
ALFRED R. BELLINGER



THE AMERICAN NUMISMATIC SOCIETY  
BROADWAY AT 156TH STREET  
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1931

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## TWO ROMAN HOARDS FROM DURA-EUROPOS

During the campaign of 1928-1929, the Yale Expedition to Dura-Europos on the Euphrates unearthed two hoards of coins. The more important, which is here treated first, was found on Jan. 26, 1929, in a pot from a house just inside the main gate of the city. It consists, besides a few unidentifiable fragments, of 789 pieces, of which 507 are base silver Antiochene tetradrachms and 282 are Antoniniani. The earliest emperor represented is Caracalla, the latest, Gallienus. The other hoard was found on Dec. 5, 1928, during the excavation for the Expedition's house. Unfortunately it was not found intact, like the other; it is impossible to be sure that we have all the pieces which originally belonged to it, and, on the other hand, at least one of the coins which were gathered up cannot have been a part of it. There are 89 tetradrachms and 5 Antoniniani of which we can be sure; they extend from Caracalla to Trebonianus Gallus. In addition, there are seven bronze coins of Elagabalus, Severus Alexander and Gordian which may well have belonged to the hoard; three illegible bronzes; and one bronze piece of Antiochus VIII, whose presence with the others must be purely accidental. Prob-

ably the silver represents most of the original collection and, since it is parallel to the other hoard, it is not likely that what we have lost would affect our general conclusions.

Remarks on the significance of these finds in relation to the history of Dura will be found in *The Excavations at Dura-Europos. Preliminary Report of Third Season, 1929-1930*. Yale University Press. Since it was not possible to treat the numismatic aspect in that place with the fulness it deserves, the American Numismatic Society has generously offered to undertake a fuller publication. Thanks are due to the Society's President, Mr. E. T. Newell, not only for this offer, but for constant advice, to whose value the many citations in these pages testify. Indispensable assistance was also rendered by Mrs. A. R. Bellinger in cleaning the coins and preparing material for illustration, and by Mrs. Clark Hopkins. The latter was a member of the Expedition when the hoards were found, and it was hoped that she might publish them herself. This unfortunately proved impossible and she had to abandon the project after much labor, for the benefit of which I am most grateful. Miss D. H. Cox has been good enough to arrange the casts for illustration, in the course of which labor she has rectified many errors of detail.

The larger part of each hoard, as has been said, consists of silver tetradrachms. They bear on the

obverse a portrait of the emperor with his name, in Greek characters, and, on the reverse, an eagle with the legend *Δημαρχικῆς ἐξουσίας* and sometimes a mention of the consulship (*Ἰπατος τὸ α', β'*, etc.). From the reign of Elagabalus on, this type is restricted to the mint at Antioch, but it was not there that the issue of such tetradrachms originated. The standard is undoubtedly the Phoenician standard which, in 126–5 B.C., replaced the Seleucid coinage at Tyre. The types there used are, *obv.*, bust of Melqarth-Heracles, *rev.*, eagle standing l. on prow. Since this series lasted past the middle of the first century A.D., it is evidently of this that Josephus speaks (*Bell. Jud.*, II, 212) when he mentions “the Tyrian nomisma, which is worth four Attic drachms.” Tetradrachms of the same standard were struck at Antioch by the early Roman emperors, but on these pieces the imperial portrait supplanted Melqarth on the obverse and the eagle was abandoned in favor of the Tyche of Antioch or a second portrait. It is not until Nero that the eagle is restored to the reverse; thereafter it is the regular type. It is still a question which of the issues from Nero to Trojan should be assigned to Tyre, which to Antioch. Since it has no bearing on these hoards I shall not enter upon it here. The reader will find it discussed by Hill in the *British Museum Catalogue* for Phoenicia and by Dieudonné in an article entitled “L'Aigle d'Antioche”



in *Revue Numismatique*, 1909, pp. 458 ff. In the latter place will also be found a consideration of the various elements represented by the eagle type, which, derived ultimately from the eagle on the hand of Zeus on the reverse of the Alexander-type, becomes at last a symbol of the Roman empire. On the pieces in these hoards the eagle always has spread wings and a wreath in his beak. Since these characteristics are constant they are not specified in the catalogue.

The closing of the mint of Tyre by Hadrian leaves no problem of attribution until the reign of Caracalla, who initiated the experiment of striking tetradrachms at a number of mints which are distinguished by various symbols placed under the eagle. In this he was followed by Macrinus and Diadumenianus and, since there is no general agreement among the authorities as to which symbols belong to each mint, that question is taken up in the body of the catalogue in connection with each piece of these three rulers. Elagabalus and his successors struck tetradrachms at Antioch only.

From Galba to Nerva the tetradrachms bear the legend  $\Theta\text{TOTC NEOT IEPOT A, B, etc.}$ , on which, cf. Eckhel, *Doctrina Numorum Veterum*, Vol. IV, pp. 416–418. The latest example of this formula is a piece of Trajan with  $\Theta\text{TOTC NEOT IEPOT B}$  (Dieudonné, *R.N.*, 1927, p. 166). Thereafter the inscription is invariably some abbrevia-

tion of Δημαρχικῆς ἐξουσίας, which is the Greek for *tribunica potestate*. Eckhel, p. 418, says: "*Inde a Trajano annus novus sacer inferri numis non desiit, sed alia tantum formula adhiberi coepta; nimirum pro ΕΤΟΤ ΝΕΟΤ ΙΕΡΟΤ scriptum deinceps ΔΗΜΑΡΧΙΚΗ ΕΞΟΥΣΙΑ, tribunica potestate, quae et singulis annis renovabatur, quod aequivalet τῷ ΝΕΟΤ, et sacra fuit, quod est pro ΙΕΡΟΤ, et singulis annis unitate aucta perinde imperatorum annos numeravit, quam Graecorum ΕΤΟΤ.*" The assumption by the emperors of tribunician power goes back to Augustus and, since it was renewed yearly, was the simplest way of dating by the emperor's reign. However, in this case, as in some others on coins, it is noticeable that the phrase is not used for dating, for the number never accompanies it, as it regularly does on inscriptions, so that Eckhel's explanation is not entirely accurate. When dates are used they are furnished by the consulship, which comes after the *tribunica potestate* when it occurs.

The weights vary considerably. A certain amount of fluctuation is caused by the cleaning: this error is not more than 0.2 grammes, while the weights of pieces not defective run all the way from 8.1 g. to 16.6. The great majority lie between 11 g. and 13.5 g. Application of the frequency table fails to prove any significant variation of the standard from one reign to another.

The Antoniniani, coins of a standard originated

by Caracalla to check the alarming deterioration of the denarius, are part of the imperial coinage and, as such, bear Latin inscriptions and the variety of types familiar throughout the empire. The specimens before us have a certain importance since most of those before Valerian were certainly struck at Antioch. In this period, before the introduction of mint marks to assist in attribution, the solution of that question rests largely on stylistic grounds, and it is therefore useful to have representatives surely of the mint at Antioch to confirm and supplement the arguments from style.

The list of the larger hoard is given first. Weights, to the nearest tenth of a gramme, follow the numbers of the coins in square brackets, unless the condition is too poor to make the weight significant.

## HOARD I

Caracalla, Feb. 4, 211–Apr. 8, 217

## TETRADRACHMS

## ANTIOCH

1 [13.5] *Obv.* ΑΤΤ·Κ·Μ·Α· ·ΑΝΤΩΝΕΙΝΟC C  
ΕΒ. (Αὐτοκράτωρ Καῖσαρ Μάρκος Αὐρήλιος Ἀντωνεῖνος Σεβαστός. Αὐτοκράτωρ is the regular Greek equivalent for "Imperator," Σεβαστός for "Augustus.") Head r., laur.

*Rev.* ΔΗΜΑΡΧ·ΕΞ·VΠΑ·ΤΟ·Δ. Eagle on leg and thigh of animal, head r. ("Ὑπατος τὸ δ'. Caracalla's 4th Consulship was in 213. The leg and thigh which the eagle holds seem to refer to the legend that the location for the city of Antioch was divinely indicated to Seleucus I by an eagle which carried off the leg of a victim which he was sacrificing to Mount Silpius. Cf. Libanius, *Antioch*, II, 348.)

(Cf. B.M.C., *Galatia, etc.*, p. 195. The *obv.* is No. 361 except that there are two dots between MA and ANT. The *rev.* is No. 362.)

2 [12.3] *Obv.* ΑΤΤΚΑΙ ΑΝΤΩΝΙΝΟC. Bust r., undraped, laur.

*Rev.* ΔΗΜΑΡΧ·ΕΞΗΓΑΤΟC ΤΟ Δ. Eagle, head l.; between legs, ram's head, l.

(Cf. B.M.C., *Galatia, etc.*, pp. 194 ff. and p. 192, Nos. 343, 345.)

Dieudonné, "L'Aigle d'Antioche," *Revue Numismatique*, 1909, p. 476, lists the ram's head among the symbols which certainly belong to Antioch. But this piece, as well as the one which he illustrates (*ibid.*, pl. IV, fig. 23) which is very similar though from different dies, seems to be of a distinctive style, and Newell suggests that it is from the mint of Damascus, which also uses the ram on its coins. But there is so much variety of style at Antioch that arguments on that ground are always dangerous, and the pieces in B.M.C. referred to above show that the ram's head was used as a symbol on pieces of M. Aurelius and Commodus which are without question from Antioch. It is safer, therefore, to let the attribution to Antioch stand, at least until some coin of Damascus can be shown where the type or symbol is the head of a ram only.<sup>1</sup>

#### APAMEA?

3 [11.5, badly eaten away] *Obv.* ATT]KAI  
AN[ΤΩΝΙΝΟCCΕΒ. Head r. laur.

*Rev.* ΔΗΜΑΡΧ-  
ΕΕΤΗΑΤ]ΟC ΤΟ Δ. Eagle on ear of corn, head l.

<sup>1</sup> Mr. Newell properly calls my attention to the use of a ram's head in the exergue of Damascus bronzes from Elagabalus on, which certainly tells strongly for his view.

This piece is worn and obscure, but the ear of corn is shown clearly on another in the possession of Mr. Newell, who tentatively suggests Apamea as the mint on account of the ear of corn which sometimes appears as a type from that mint (*e.g.*, B.M.C., *Galatia, etc.*, p. 233, No. 4.)

## ARADUS

4 [11.8] *Obv.* AVTKMAV ANTΩ[N]€INOC.  
Bust r., draped, radiate.

*Rev.* ΔΗΜΑΡΧΕΤΗΑΤΟC TO. Eagle,  
head r.; between legs, bull's head, r.

This piece can hardly be attributed to Antioch. It is of such poor workmanship as to be positively barbarous. The face of Caracalla is much too small for the head and the lettering on both sides is clumsy. Although the coin is somewhat worn, it seems clear that the reverse inscription actually ends with the word *τό* with no numeral after it. The coins of Macrinus and of Diadumenianus, given below, on which the bull's head reappears may be said to resemble this in lack of style, though there are no specific similarities of detail. Mr. Newell has another piece like this of Diadumenianus. His suggestion of Aradus as the mint is likely, both from the frequency of the bull as a type on the Aradus coinage and from the rudeness of workmanship of the imperial issues, of which specimens are given, B.M.C., *Phoenicia*,

Pl. VI. If this symbol be given to Aradus, the coin of Caracalla with crab and crescent between the eagle's legs, palm tree in the field (B.M.C., *Phoenicia*, Pl. XLV, 6) doubtfully assigned to Aradus by Imhoof-Blumer (*Griech. Münz.*, No. 786) should be transferred to Ascalon, which possibility he also suggests.

## EMESA

5 [11] *Obv.* AV·T·KMAN·TΩNЄINOCC Є B.  
Bust r., draped, laur.

*Rev.* ΔHMAPXЄΞTIIATO[Δ. Eagle,  
head l.; between legs, bust of Helios l., radiate; in  
field, l., Γ.

(Cf. B.M.C., *Galatia, etc.*, p. 291, Nos. 7 and 9.)

Imhoof-Blumer (*op. cit.*, p. 766 f.) attributes this symbol to Heliopolis (Baalbek) but Dieudonné (*R.N.*, 1906, pp. 132 ff.) rightly prefers Emesa (Homs), pointing out that, in spite of its name, Heliopolis never used Helios on its coins, and referring particularly to a piece of Antoninus Pius with *rev.* ЄMICHNON and radiate bust of Helios r.

## TYRE

6 [12.9] *Obv.* AVTKAIAN TWNINOC C Є.  
Bust r., draped, laur.

*Rev.* ΔHMAPX·ЄΞ·TIIATOC TO·Δ.  
Eagle on club (handle l.), head l.; between legs,  
murex shell.

(B.M.C., *Phoenicia*, p. 304, Nos. 38–41. Imhoof-Blumer, *op. cit.*, p. 763, No. 792. Another is published in the Catalogue of the McClean Collection, iii, p. 353, No. 9386, but is erroneously attributed to Antioch, the murex shell having been mistaken for a star.)

Imhoof-Blumer's attribution to Tyre is now universally accepted. Cf. Dieudonné, *R.N.*, 1909, p. 475.

## ANTONINIANUS

### ANTIOCH?

1 [4.3] *Obv.* ANTONINVS] PIVS AVG GERM.  
Bust r., radiate, wearing cuirass.

*Rev.* PMTR PXVIII COS III[I] P[P].  
Jupiter, nude, standing r., mantle on l. shoulder, holding in r., thunderbolt, in l., long scepter. (Pontifex Maximus Tribunicia Potestate XVIII Consul IIII Pater Patriae. The title Pius was taken in 200, Germanicus in 213. He became Pontifex Maximus in 211, and had taken the title Pater Patriae in 205. The 4th Consulship was in 213, but the 18th tribunicia potestate was from Dec. 10, 214, to Dec. 9, 215, and this type is, therefore, to be assigned to 215 rather than 213, which is Cohen's date.)

Although the piece is badly corroded, the bust



is clear, and the likeness of the style to the tetradrachms suggests the mint of Antioch.

(Cohen, IV, p. 173, No. 279.)

MACRINUS, Apr. 11, 217–June 8, 218

### TETRADRACHMS

#### ARADUS

8 [13] *Obv.* A·U·O·CЄ·MAKPINOC. Bust r., draped, laur(Αὐτοκράτωρ Μάρκος Ὀπέλλιος Σεονῆρος Μακρίνος).

*Rev.* ΔΗΜΑΡΧΕΞΥΠΙΑΤOC Δ. Eagle, head r.: between legs, head and neck of humped bull r.

Cf. 4, Caracalla. Here the symbol is not merely the head of a bull, but the head and neck, and, though it is crude, it certainly seems that the humped bull is intended. This animal appears first on coins of Aradus in the 1st century B.C. and it is the commonest type on the Imperial bronze. For the date, cf. 9, below.

#### BEROEA

9 [12.8] *Obv.* AVTKMOΠ]CЄ MAKPINOC CЄ. Bust r., draped, laur.

*Rev.* ΔΗΜΑΡΧΕΞΥΠΙΑΤOCΠΠ. Eagle, head l.; beneath claws, to l. B, to r. Є; between legs, fantastic bird.

(B.M.C., *Galatia, etc.*, p. 132, Nos. 19, 20. Imhoof-Blumer, *Revue Suisse de Numismatique*, 1898, p. 42, No. 5.)

This symbol is assigned to Beroea in *Griech. Münz.*, pp. 761, 762, where, however, as in B.M.C. the *rev.* inscription is ΤΙΑΤΟC Δ or ΤΙΑΤΟC ΤΟ Δ. Now Macrinus' 1st Consulship came in 218, and he therefore could not have had a 4th. This inscription, then, must have been a mere thoughtless copying of that of Caracalla if, indeed, an actual reverse of his was not used for the new emperor's coins. The reading of our piece ΤΙΑΤΟC ΠΠ (πατήρ πατρίδος, a title assumed in 17) is correct for Macrinus and so is certainly later than the other. It is, of course, of the year 218.

## CARRHÆ

10 [13] *Obv.* AVTKMO]Π C € MAKPINOC C€. Bust r., draped, radiate.

*Rev.* ΔΗΜΑΡΧ[€ΞΤΠ]ΑΤΟC. Eagle, head r.; between legs, crescent; in field l., star; in ex ...

(B.M.C., *Galatia, etc.*, p. 199, Nos. 394–396. *Hunt. Coll.*, iii, p. 174, No. 240.)

Dieudonné (*R.N.*, 1909, p. 476) attributes this symbol "surement à Antioche," but apparently only because a star appears here as it does on some of the pieces of Antioch, but the crescent,

which is here the more conspicuous symbol, has no particular connection with that town, and Mr. Newell suggests Carrhae, where the star and crescent are of constant occurrence. The only silver coinage attributed to Carrhae consists of two tetradrachms, apparently from a Mesopotamian mint, one with busts of Caracalla and Plautilla, the other with Caracalla and Severus. They are described by Imhoof-Blumer (*Rev. Suisse*, 1908, p. 131) and figured in B.M.C., *Galatia, etc.*, Pl. L, 6 and 7. Their weights, 11.6 g. and 10.35 g., though light, are appropriate for the Antiochene Standard. It may be argued that this issue of different types would make less probable the striking of the eagle reverse here, but, on the other hand, the evidence that the mint at Carrhae was used for tetradrachms at all should have weight and, as we know from the abundance of bronze, it was a mint much used by Caracalla. The crescent and star appear on tetradrachms of Caracalla (B.M.C., *Galatia, etc.*, p. 195, Nos. 367, 368) and, though there is no published coinage of Macrinus from Carrhae, there is no reason to suppose that he did not use this like the rest of Caracalla's mints.

11 [12.8] *Obv.* AVTK]M·OΠ·CЄ·MAKPINOC  
CЄ. Head r., radiate.

*Rev.* ΔHMAPX·Є·Ξ·TIIATOC. Eagle, head r.; between legs, crescent; in field l., star; in ex ...

## EMESA

12 [14.1] *Obv.* AVTOKMOΠCЄ ... MAKPINOC-  
[CCB Bust r., undraped, laureate.

*Rev.* [ΔHMAPXЄΞTHA]TOC ΠΠ.

Eagle, head l.; between legs, bust of Helios l.,  
radiate; behind bust of Helios, Λ.

(Cf. No. 5, Caracalla) ΠΠ for ΠΠΠ.

13 [13.3] *Obv.* Same.

*Rev.* Same, but no letter behind bust  
of Helios; in field l., under eagle's beak Ϸ.

## MOPSUS

14 [13.2] *Obv.* ATTKMOΠ[CЄ MAKPI]NOC  
CC Bust r., draped, laureate.

*Rev.* ΔHMAP CЄTPATONΠΠ (X  
omitted). Eagle, head l.; between legs, altar.

(Cf. B.M.C., *Galatia*, etc., p. 199, No. 397,  
where the T in THATOC is omitted.)

Wroth, *l.c.*, and Dieudonné (*R.N.*, 1090, p. 478)  
attribute this symbol doubtfully to Antioch.  
Newell suggests Edessa because of the common  
appearance there of an altar as symbol. It is  
reasonable, though not necessary, to expect tetra-  
drachms from Edessa if we have them at Carrhae.  
(*Obiter dicta* it might be suggested that the little  
temple with pediment which is the symbol of  
B.M.C., *Galatia*, p. 197, No. 379, may be con-  
nected with that on the Edessa bronzes, B.M.C.,

*Mesopotamia*, p. 101 f., Nos. 69–71.) But there seems better evidence to attribute this piece to Mopsus in Cilicia. A silver piece of Hadrian and one of Antoninus Pius from Mopsus (B.M.C., *Cilicia*, pp. 105, 106, Nos. 12 and 15) show a spread eagle with just such an altar between its legs. The inscription is different, but the weights [13.54] show that the standard was the same, and the type is so similar that this seems the most reasonable attribution.

15 [13.3] *Obv.* ΑΤΤΟΚΜΟΠΣΕ]ΜΑΚΡΙΝΟC C.  
Bust r., undraped, laureate.

*Rev.* ΔΗΜΑΡΧΕ[ΕΤΠΑΤΟΠΠ. Same type and symbol.

#### TARSUS

16 [11.8] *Obv.* ΑΤΤΚ]ΜΟΠΣΕ ΜΑΚΡΕΙΝΟC  
CΕ Bust r., draped, laureate.

*Rev.* ΔΗΜΑΡΧΕΕΤΠΑΤΟΠΠ. Eagle, head l.; between legs, group of three Graces in laurel wreath.

(Cf. B.M.C., *Galatia*, p. 196, No. 371, Caracalla.)

Dieudonné (R.N., 1909, p. 478) gives this doubtfully to Antioch, but there is nothing to connect the three Graces with that city, while they do appear as the Reverse type on coins of Maximinus from Tarsus (B.M.C., *Cilicia*, p. 207, Nos. 233–235). Also we know that Tarsus, like

Mopsus, struck tetradrachms of the Antioch Standard: there is a piece of Hadrian (B.M.C., *Cilicia*, p. 187, No. 150) with a spread eagle on a harpa; its weight is 13.35.

### UNCERTAIN MINT

17 [14.2] *Obv.* ΑΤΤΚΑΙΜΟΠΙC ΕΘ ΜΑΚΡΙΝ-  
[OC. Bust r., draped, laureate.

*Rev.* ΔΗΜΑΡΧΕΥΤΙΑΤΟCΠΗ.

Eagle, head l., standing on thyrsus around which serpent is twined.

Dieudonné's attribution to Antioch is *faute de mieux*. There are four mints which have some connection with this symbol, though in no case is it close. Berytus has coins of Elagabalus (B.M.C., *Phoenicia*, pp. 84 f., Nos. 216–219) showing Eshmun-Asclepius between two serpents. But there are three other symbols conjecturally assigned to Berytus (B.M.C., *Phoenicia*, p. 303, Nos. 31, 32; p. 305, No. 43; Pl. XXXVII, No. 6). Carne also shows the same deity (B.M.C., *Phoenicia*, p. xxxix, p. 111, No. 3), but the date, 221 B.C., makes the connection very remote. Sidon has a coin of Severus Alexander (*ibid.*, p. 199, No. 321), on which he appears with a serpent staff, but Wroth (*ibid.*, p. 303, No. 33) assigns to Sidon a tetradrachm with a wheeled shrine containing a baetyl as symbol. Ptolemais-Ace uses a caduceus both as an independent type and as a symbol (*ibid.*, pp. lxxxvi f.). The present symbol

has hardly the form of a caduceus, but this is perhaps the likeliest attribution. It is the one suggested by Newell.

18 [13.9] *Obv.* ATT[KAIMOΠC] EOMAKPINOC. Same type.

*Rev.* ΔΗΜΑΡΧ[ΕΞΤΗΑΤ]ΟCΠΠ.

Same type.

DIADUMENIANUS, Apr. 11, 217–June 8, 218

### TETRADRACHMS

#### ARADUS?

19 [12.7] *Obv.* ...NINOKAI. (The full inscription should have been Μάρκος 'Οπέλλιος 'Αντωνίνος Καῖσαρ. The name Antoninus was given him by Macrinus on the latter's ascending the throne. He is regularly called Marcus Opellius Diadumenianus on his Latin coins.) Bust r., draped, head bare.

*Rev.* ΔΗ[ΜΑΡΧΕΞ]ΟΤCΙΑC. Eagle, head l., on thyrsus, around which serpent is twined; between legs, bull's head, l.

This combination of symbols is a great nuisance. There is no reason for the thyrsus and serpent to appear at Aradus unless it be the very tenuous connection with Asclepius-Eshmun shown on the coins of the neighboring offspring mint of Carne,

as noted above; but the bull's head seems the more distinctive device, and this is therefore doubtfully assigned to Aradus.

## HIEROPOLIS

20 [12.7] *Obv.* ΑΤΤ·ΚΜΟΠΕΛΑΝΤΩΝΕΙΝΟC  
CΕΒ. Bust r., draped, radiate.

*Rev.* ΔΗΜΑ[ΡΧΕΞΤΠΑΤ]ΟC. Eagle, head r., between legs, lion r.

(B.M.C., *Galatia*, p. 145, No. 54, McClean Collection, iii, p. 353, No. 9390.)

Αὐτοκράτωρ is an error. Diadumenianus, who was only nine years old at the time of his death, was Caesar but not Emperor. As he was never Consul the Reverse is also an error or a die of Macrinus. The coin in the McClean Collection is from different dies but has the same inscriptions. This symbol was assigned to Hieropolis by Imhoof-Blumer, *Grisch. Münzen*, p. 761, No. 782.

## TYRE

21 [14.6] *Obv.* ΜΟΠΑΝΤΩΝΙΝΟCΚΑΙ. Bust r., draped, head bare.

*Rev.* ΔΗΜΑΡΧΕΞΟΤCΙΑC. Eagle, head l., between legs, murex shell.

Cf. No. 6, Caracalla.



ELAGABALUS, May 16, 218–March 11, 222

*TETRADRACHMS*

ANTIOCH

With the accession of Elagabalus, Caracalla's policy of minting tetradrachms in a large number of places is abandoned; hereafter they are struck at Antioch only. All the pieces in this hoard are from Elagabalus' 2nd Consulship, in 219. There are coins from his 4th Consulship, 222 (B.M.C., *Galatia, etc.*, p. 203, No. 425; *Hunt. Coll.*, iii, p. 176, Nos. 253, 254), and one reading simply YΠA TOC, presumably from 218 (*Hunt. Coll.*, iii, p. 175, No. 251).

The following types are used:

*Obverse.* A. ΑΤΤΚΜΑ...ΑΝΤΩΝΕΙΝΟC C ΕΒ  
(Αὐτοκράτωρ Καῖσαρ Μάρκος Αὐρήλιος Ἀντωνεῖνος Σεβαστός). Head r., laur. (This use of the identical inscription employed by Caracalla is sometimes very confusing, as the portraits are often not clearly distinguished. Here, however, not only the portrait but the reverse, with ΔΕ in the case of Elagabalus, makes the difference obvious. The pellets in the inscription might be taken as *officina* marks in view of the use of pellets for that purpose later at Antioch, but comparison with pieces of Caracalla and Macrinus (*e.g.*, Nos. 1, 5, 12 above) make it plain that this is a mere matter of decora-

tion.<sup>1</sup> Elagabalus must have used more than one *officina* in Antioch, but there is no way of distinguishing their issues.)

B. ΑΤΤΚΜΑ...ΑΝΤΩΝΕΙΝΟC CEB. Head r., laur.

C. ΑΤΤΚΜΑΑΝ...ΤΩΝΕΙΝΟC CEB. Bust r., draped, laur.

D. ΑΝΤΩΝΕΙΝΟC CΕΒΑΥΤΚ ('Αντωνεῖνος Σεβαστὸς Αὐτοκράτωρ Καῖσαρ). Head l., laur. (This inscription does not occur in B.M.C., *Galatia*, etc., Hunt. Coll., iii, p. 175, No. 252, has the bust l., laur., paludamentum over shoulder.

*Reverse.* 1. ΔΗΜΑΡΧΕΥΤΗΑΤΟCΤΟΒ. Eagle, head l., in field, to l. Δ, to r. Ε (for Δημαρχικῆς ἐξουσίας); between legs, star. (This, according to Dieudonné (*R.N.*, 1909, p. 478) is the sun, particularly appropriate to Elagabalus, who was high priest of Helios.)

2. ΔΗΜΑΡΧΕΥΤΗΑΤΟCΤΟΒ. Eagle, head r., in field, to l. Δ, to r. Ε; between legs, star.

22, 23 A1. [13.4, 12.4.]

(B.M.C., *Galatia*, etc., p. 202, Nos. 417, 418.)

24-50 B1. [15.1, 14.9, 14.6, 14.4, 13.9, 13.5(4), 13.1, 12.8, 12.6, 12.5(4), 12.3, 12.2, 12.1, 12.0, 11.9, 11.5(2), 11.4, 11.2, 10.9(2).]

(B.M.C., *Galatia*, etc., p. 202, No. 420.)

<sup>1</sup> Mr. Newell aptly suggests that the pellets may be meant to represent the berries of the wreath.

(The reverse inscription of 30 ends TO or TB.)

51, 52 C1. [14.1, 11.8.]

53-59 B2. [14.0, 12.8(2), 12.7, 12.6(2), 12.4.]

(B.M.C., *Galatia, etc.*, p. 202, No. 423.)

60 D1. [11.8.]

## JULIA MAMAEA, 222-235

### ANTONINIANUS

#### UNCERTAIN MINT

60a *Obv.* IVLIA M[AMAE]A AVG. Bust r., diad.

*Rev.* FECVND[AVGV]STAE Fecunditas. Standing l., r. hand outstretched to child, in l., cornucopiae.

(Cohen, iv, p. 490, No. 5.)

Since all of the published coins of Julia Mamaea from Antioch are bronze there is no reason to suppose that this piece was struck there. Its condition is too poor to allow any conjecture as to the mint.

(Severus Alexander (Mar. 11, 222-Mar. 19, 235) struck no tetradrachms and is not represented in this hoard.)

GORDIAN III, June 238–March 244

## TETRADRACHMS

## ANTIOCH

The following types are used:

*Obverse.* A. ΑΤΤΟΚΚΜΑΝΤΤΟΡΔΙΑΝΟC CEB  
(Αὐτοκράτωρ Καῖσαρ Μάρκος Ἀντώνιος Γορδιάνος Σεβαστός). Bust r., draped, laur. (The ANT stands here for Antonius, not Antoninus, cf. "Lampridius," *Elagabalus*, xviii, 1.)

B. Same inscription. Bust l., radiate in cuirass.

C. Same inscription. Bust l., radiate in cuirass.

D. Same inscription. Bust l., radiate in cuirass; shield on l. shoulder, spear head over r. shoulder with r. hand.

*Reverse.* 1. ΔΗΜΑΡΧΕΞΟVCΙΑC. Eagle, head l., in ex S.C. (Senatus Consultum, the regular mark on money coined by authority of the Senate, appears commonly on the bronze of Antioch from the time of Augustus on, since Caracalla in combination with ΔC. The Latin symbol here appears for the first time on the tetradrachms.)

2. ΔΗΜΑΡΧΕΞVIIATOC TOB. Same type. (Gordian's 2nd Consulship was in 241. This reverse forms a transition between 1, which is undated, and 3, with the ram.)

3. ΔΗΜΑΡΧΕΞVIIATOB. Eagle, head l.; beneath, ram, running l., looking r., above its head.

crescent. The ram is the astronomical sign of Aries, apparently standing for the month in which the colony was founded. It occurs as a type on the bronze from the time of Augustus.

4. Same inscription. Same type but eagle's head r.

5. Same inscription. Eagle's head l.; ram running r., looking l.

61-65 A1. [14.7, 14.1, 13, 12.3, 11.3.]

(B.M.C., *Galatia, etc.*, p. 211, No. 497.)

66 C1. [11.9.]

(B.M.C., *Galatia, etc.*, p. 211, No. 498.)

67, 68 A2. [13, 12.4.]

(B.M.C., *Galatia, etc.*, p. 211, No. 499, has this *Rev.* with *Obv.* C; cf. Hoard II, No. 6.)

69-71 A3. [12.3, 12.2, 10.9.]

(B.M.C., *Galatia, etc.*, p. 211 f., Nos. 501 f.)

72, 73 B3. [13.4, 12.3.]

74, 75 D3. [11.8, 11.3.]

(B.M.C. has not this obverse.)

76 A4. [13.1.]

77, 78 A5. [12, 11.1.]

(B.M.C., *Galatia, etc.*, p. 212, Nos. 502, 503.)

## ANTONINIANI

### ANTIOCH

Colonel Voetter, discussing the coins of Gordian III (*Num. Zeit.*, XXV, 1893, pp. 385-420, par-

ticularly pp. 407-410) observed that certain Antoniniani of his first two years should be assigned to Antioch. Among the types he noted are the first and the third, fourth and fifth here catalogued. The second escaped his attention. But it is clear that no distinction can be made between the Antoniniani of this hoard struck before 240 and those struck later. All certainly belong to the same mint and that mint is certainly Antioch. Unfortunately their condition is bad; they have suffered more than any of the other coins in the hoard. In many cases they have "bubbled" and sometimes they are eaten through, so that the series cannot be adequately illustrated. No attempt is made to give the weights, since none of them would be accurate.

The following types are used:

*Obverse.* A. IMP CAES M ANT GORDIANVS AVG (Imperator Caesar Marcus Antonius Gordianus Augustus). Bust r., draped, radiate.

B. IMP GORDIANVS PIVS FEL AVG (Imperator Gordianus Pius Felix Augustus). Same type. (The titles Pius and Felix occur on inscriptions from the beginning of Gordian's reign, but on coins only after 239. Cf. Liebenam, *Fasti Consulares*, p. 112.)

*Reverse.* 1. PAX AVGVSTI. Peace standing l., holding, in r., olive branch, in l., transverse scepter. (July 25-Dec. 9, 238.)

2. VIRTVS AVG. Soldier standing l., leaning with r. on shield, with l. on spear. (July 25–Dec. 9, 238.)

3. P M TR P II COS PP. (Pontifex Maximus, Tribunicia Potestate II Consul Pater Patriae.) Figure standing l., holding in r. globe, in l., transverse scepter. (Voetter, *l.c.*, dates this “after Dec. 10, 238,” which is the date of the tribunicia potestate II, but the 1st Consulship is in 239 (Liebenam, *l.c.*), so that this type ought rather to be given to that year, like the next two.)

4. CONCORDIA AVG. Concord seated l., holding patera and cornucopiae (239).

5. LIBERALITAS AVGVSTI II. Liberality standing l. holding in r. uncertain object, in l. cornucopiae (239).

6. ROMAE AETERNAE. Rome seated l., helmeted, holding in outstretched r. victory, with l. leaning on spear, behind her shield. (After 239.)

7. FORTVNA REDVX. Fortune seated l., holding in r. rudder, in l., cornucopiae. (After Dec. 10, 239.)

8. IOVI STATORI. Jupiter, nude, standing facing, looking r., holding in r. scepter, in l. thunderbolt. (After Dec. 10, 129.)

9. AETERNITATI AVG. Sol standing l., r. hand raised; in l. globe. (Before Dec. 9, 240.)

10. LAETITIAE AVG N (Augusti Nostri). Laetitia standing l., holding in r., wreath, in l., anchor. (Before Dec. 9, 240.)

11. VIRTVTI AVGVSTI. Hercules, nude, standing r., r. hand on hip, with l. leaning on club which rests on rock; to r. lion's skin. (Before Dec. 9, 240.)

12. MARTEM PROPVGNATOREM. Mars helmeted r., holding in r. spear, in l., shield. (After Dec. 10, 240.)

13. FELICITAS TEMPORVM. Felicitas standing l., holding in r. caduceus, in l. cornucopiae. (After Dec. 10, 241.)

14. PM TR P V COS II PP (Pontifex Maximus, Tribunicia Potestate V, Consul II, Pater Patriae). Apollo half naked, seated l., on throne, holding in r. laurel branch. (The 2nd Consulship was in 241 but the 5th tribunicia potestate did not begin until Dec. 10, 241.)

15. Same inscription. Gordian in military garb standing r., holding in l. globe, in r. transverse spear. (After Dec. 10, 241.)

16. SECURITAS PERPETVA. Securitas standing facing, looking l., her legs crossed, holding in r. long scepter, her l. elbow leaning on column. (After Dec. 10, 241.)

17. VICTORIA AETERNA. Victory standing l., holding in r. shield which rests on ground, in l., palm; at her feet, captive. (After Dec. 10, 241.)

18. PROVIDENTIA AVG. Providentia standing l., holding in l. uncertain object, in r. scepter. (After Dec. 10, 242.)



19. FIDES MILITVM. Fides standing facing, holding in each hand military standard. (After Dec. 10, 243.)

20. ORIENS AVG. Emperor standing facing, looking l., r. hand raised, cloak falling over l. arm, in l. hand globe. (After Dec. 10, 243.)

21. PAX AVGVSTI. Peace rushing l., holding in upraised r. olive branch, in l., scepter. (After Dec. 10, 243.)

22. SAECVLI FELICITAS. Emperor, in military garb, standing r., holding in r. transverse spear, in l., globe. (After Dec. 10, 243.)

23. VICTORIA AVG. Victory walking r. holding in uplifted r. wreath, over l. shoulder, palm. (After Dec. 10, 243.)

79 A1.

(Cohen, V, p. 39, No. 174.)

80-84 A2.

(Cohen, V, p. 64, No. 381.)

85 A3.

(Cohen, V, p. 41, No. 196.)

86 A4.

(Cohen, V, p. 27, No. 48.)

87 A5.

(Cohen, V, p. 34, No. 130.)

88-90 B6.

(Cohen, V, p. 56, No. 314.)

91-102 B7.

(Cf. Cohen, V, p. 31, No. 98. He gives only "buste lauré" for the obv.)

103-109 B8.

(Cohen, V, p. 32, No. 109.)

110-113 B9.

(Cohen, V, p. 26, No. 41.)

114, 115 B10.

(Cohen, V, p. 33, No. 121.)

116-122 B11.

(Cohen, V, p. 67, No. 404.)

123-130 B12.

(Cohen, V, p. 37, No. 160.)

131-137 B13.

(Cohen, V, p. 29, No. 81.)

138-145 B14.

(Cohen, V, p. 47, No. 261.)

146-148 B15.

(Cohen, V, p. 48, No. 266.)

149-160 B16.

(Cohen, V, p. 57, No. 336.)

161-168 B17.

(Cohen, V, p. 60, No. 353.)

169-173 B18.

(Cohen, V, p. 54, No. 298.)

174, 175 B19.

(Cohen, V, p. 30, No. 92. He gives "*Fidélité debout à gauche.*")

176-185 B20.

(Cohen, V, p. 38, No. 167.)

186 B21.

(Cohen, V, p. 39, No. 179.)

187-198 B22.

(Cohen, V, p. 56, No. 319.)

199 B23.

(Cohen, V, p. 60, No. 362.)

200-218 B rev., illegible.

PHILIP, March 244–Autumn 249

OTACILIA, March 244–Autumn 249

PHILIP JR., March 244–Autumn 249

The first point to be made clear in the arrangement of these issues is that the Obverse types of Philip Jr. and Otacilia are all struck by Philip Sr. and are not independent issues. This is made certain by the dates involved: Philip Jr. appears on coins dated  $\text{ΠΙΛΑΤΟΙ}$  and  $\text{ΠΙΛΑΤΟΔ}$ , but as his 1st consulship fell in 247 and he is only known to have had two, a 3rd consulship would be unlikely and a 4th impossible, since he died with his father in 249. Of course the consulships associated with Otacilia must have been those of her husband. It is evident, moreover, that the Reverse types used for the three persons are identical, as the illustrations will show. It is by these reverses, then, that the issues are to be dated. We know from other sources that Philip's 1st consulship came in 245, the 2nd in 247, the 3rd in 248. This ought to date Reverse types 4–6, but there is an annoying difficulty in connection with

Philip Jr. On the ΤΙΙΑΤΟΓ coins he appears both as Caesar and as Augustus. This should mean that he was made Augustus in 248, but, according to Liebenam, *Fasti Consulares*, he was made Augustus in 247; Dieudonné (*R.N.*, 1929) following Cagnat, puts it in 246. Can we assume that the mint officials at Antioch were ignorant of his elevation for so long? The alternative is to credit them with another serious error. Dieudonné assumes that they believed Philip Sr.'s 2nd consulship to have come in 246 instead of 247, and the 3rd in 247 instead of 248. According to that hypothesis the ΤΙΙΑΤΟΔ coins were struck in 248 and 249, that is, the year of his 3rd consulship and the next year. Except for these coins there is no evidence for a 4th consulship. In spite of the advantages of this arrangement I am sceptical of its soundness and prefer, with due acknowledgment of the difficulties, to assign Reverse 4 to 245, 5 and 6 to 248, 7 and 8 to 249. We have to determine, then, the position of types 1-3. Now the eagle of types 5-8 are of identical style and they are, moreover, so very much like those of Trajan Decius that it is evident that no issues with unlike eagles, such as Philip's 1-3, can separate them. On the other hand, type 4 is quite different from type 5 and so much like 2 that it is evident that they are to be placed next each other. But in which order? It is natural to assume that undated issues would precede the

dated ones rather than break their sequence, but this arrangement will necessitate putting types 1-3 in 244 after February or March, when Philip came to the throne, whereas the gap between 245 and 248 will be filled only by the doubtful issues of the 2nd consulship.<sup>1</sup> There is a good deal to be said for assigning types 2 and 3 to 246 though, for convenience, I have put them, as Dieudonné does, before the dated issues. As for type 1, it is clearly Philip's first coinage. It is never found with obverses of Philip Jr. and Otacilia. The inscription MONURB offers a problem not yet solved. It is generally agreed that it stands for MONETA URBIS or some such phrase. It had been taken for granted that the *Urbs* in question was Antioch, but Dieudonné (*l.c.*) rightly calls attention to the fact that normally Rome alone is *Urbs*, other cities being *Civitates*. His explanation of the phrase is that the tetradrachms were to be accepted as imperial currency; money of the city of Rome. I cannot see what the effect of this would have been, but I have no better solution to offer.<sup>2</sup> It may be that it puzzled

<sup>1</sup> TIATOB coins appear neither in these hoards nor in the British Museum, but Dieudonné (*l.c.*) implies that they occur in the collection of the Cabinet des Médailles.

<sup>2</sup> In favor of the theory is the fact that the legend is in Latin rather than in Greek, which would be the normal language for Antioch, but Dieudonné's suggestion that this issue and the ones with ANTIOXIA circulated together, like the Belgian issues with French and Flemish legends, is inadmissible. The types were not contemporary.

Philip's subjects as much as it does us, for it never appears after that first issue and was presently replaced by the name of Antioch, which anybody could understand.

The following types are used: Tetradrachms.

*Obverse.* A. ΑΥΤΟΚΚΜΙΟΥΑΦΙΛΙΠΠΟΥΤΣΕΒ  
(Αὐτοκράτωρ Καίσαρ Μάρκου Ἰουλίου Φιλίππου Σεβαστοῦ). Bust r., draped, laureate. (This inscription, with the name in the genitive, is associated only with Reverse 1.)

B. ΑΥΤΟΚΚΜΙΟΥΑΦΙΛΙΠΠΟΥΤΣΕΒ. Bust r., draped, laureate (with Reverse 2 and 4).

C. Same inscription. Bust r., draped, radiate (with Reverse 2 and 4. B.M.C. has an obverse with this inscription and bust l., not represented in this hoard, with Reverse 3).

D. ΑΥΤΟΚΚΜΙΟΥΑΙΦΙΛΙΠΠΟΥΤΣΕΒ. Bust r., draped, laur. (This inscription, with ΙΟΥΑΙ instead of ΙΟΥΑ is regularly used after the 1st consulship.)

E. Same inscription. Bust r., draped, radiate.

F. Same inscription. Bust l., draped, laureate.

G. Same inscription. Bust l., draped, radiate.

H. Same inscription. Bust l., radiate, undraped.

I. Same inscription. Bust l., radiate, in cuirass.

J. Same inscription. Bust l., radiate, in cuirass, rear view of shoulders.

K. Same inscription. Bust l., radiate, in cuirass, shield on l. arm.

L. Same inscription. Bust l., radiate, in cuirass, shield on l. arm, rear view.

M. ΜΑΡΩΤΑΚΙΑCΕΟΝΗΡΑΝCΕΒ (Μάρκιαν Ὀτακίλιαν Σεούραν). Bust of Otacilia r., crescent behind shoulders.

N. Same inscription. Bust l.

O. ΜΑΡΩΤΑΚΙΑCΕΟΝΗΡΑΝCΕΒ. Bust l.

P. ΜΑΡΙΟΝΑΙΦΙΛΙΠΠΟCΚΕCΑΡ (Μάρκος Ἰούλιος Φίλιππος Κέσαρ - for Καῖσαρ). Bust of Philip Jr. r., draped, head bare.

Q. Same inscription. Bust r., draped, radiate.

R. Same inscription. Bust l., draped, head bare.

S. Same inscription. Bust l., draped, radiate.

T. ΑΤΤΟΚΚΜΙΟΤΑΙΦΙΛΙΠΠΟCCEB. Bust of Philip Jr. r., draped, laur.

U. Same inscription. Bust r., draped, radiate.

V. Same inscription. Bust l., draped, laureate.

W. Same inscription. Bust l., draped, radiate.

X. Same inscription. Bust l., radiate in cuirass.

*Reverse.* 1. ΔΗΜΑΡΧΕΞΟΤCΙΑC. Eagle, head l., under wings, to l. S., to r. C. in ex. ΜΟΝΥΡΒ.

a. Nothing in field.

b. B in field.

c. Δ in field.

d. € in field.

e. s in field.

(B.M.C., p. 213, No. 509, has A in the field, and it is reasonable to suppose that Γ also occurs.

These are almost certainly officina marks. Aside from the probability that this type was all struck in 244, the comparative rarity of these pieces makes it unlikely that they continued to be struck throughout the reign, and, though there would be a year for each letter how should we account for those with no letter? <sup>1</sup>)

2. Same inscription. Eagle on palm branch, head l., in ex. S.C.

3. Same inscription. Eagle on palm branch, head r., in ex. S.C.

4. ΔΗΜΑΡΧΕΩΤCΙΑCΤΗΑΤΟΑ. Eagle on palm branch, head l., in ex. S.C.

5. ΔΗΜΑΡΧΕΩΤCΙΑCΤΗΑΤΟΓ. Eagle, head l., in ex. ANTIOXIA and S.C.

6. Same inscription. Eagle, head r., in ex., same inscription:

- a. Tail l., r. wing behind r. leg.
- b. Tail l., wings displayed.
- c. Tail r., l. wing behind l. leg.
- d. Tail r., wings displayed.

7. ΔΗΜΑΡΧΕΩΤCΙΑCΤΗΑΤΟΔ. Eagle, head l., in ex., same inscription.

<sup>1</sup> It is surprising that the practice of marking officinae, once adopted, should be abandoned, but there is an analogy from the reign of Philip: in 248 the marks of six officinae appear on coins from the mint of Rome (though not on all of them) but on none of the issues of 249. Cf. P. Brock, *Numismatische Untersuchungen über die Spätere römische Kaiserzeit, mit besonderer Beziehung auf die Munzmarken. Zeit. für Num.*, 2 (1875), pp. 189–245 and 3 (1876), p. 61.



8. Same inscription. Eagle, head r., in ex., same inscription.

219-230 A1a. [16.6, 12.8, 12.6, 12.3, 11.4, 2, 11.2, 2, 11.0, 2, 10.9, 10.8, 10.5.]

(B.M.C., *Galatia, etc.*, p. 213, No. 508.)

231, 232 A1b. [13.1, 12.3.]

(B.M.C., *Galatia, etc.*, p. 213, No. 510.)

233-237 A1c. [13.1, 12.3, 11.6, 11.5, 10.2.]

238 A1d. [12.6.]

239, 240 A1e. [13.5, 10.1.]

241 B2. [10.9.]

242-248 C2. [14.0, 11.8, 11.5, 11.4, 11.3, 9.3, 9.1.]

249-251 M2. [12.4, 12.3, 11.8.]

(B.M.C., p. 216, No. 540.)

252-256 P2. [13.4, 12.1, 11.8, 10.7, 10.8 (badly corroded).]

(B.M.C., *Galatia, etc.*, p. 217, No. 546.)

257 R2. [12.0.]

(B.M.C., *Galatia, etc.*, p. 217, No. 548.)

258 P3. [9.9.]

259, 260 C4. [12.8, 11.8.]

(B.M.C., *Galatia, etc.*, p. 213, No. 511.)

261-263 M4. [12.0, 11.2, 11.0.]

(B.M.C., *Galatia, etc.*, p. 216, No. 541.)

264 N4. [13.1.]

265, 266 P4. [12.6, 12.4.]

267 R4. [10.6.]

268-270 E5. [14.2, 11.2, 10.9.]

(B.M.C., *Galatia, etc.*, p. 213, No. 514.)

- 271, 272 F5. [13.2, 12.0.]  
 273, 274 T5. [13.2, 12.3.]  
 275 V5. [13.1.]  
 (B.M.C., *Galatia, etc.*, p. 218, No. 555.)  
 276 X5. [11.6.]  
 277-279 D6b. [12.7, 12.5, 11.4.]  
 280-283 D6d. [13.1, 12.0, 10.4, 9.9.]  
 284, 285 E6a. [13.6, 11.4.]  
 (B.M.C., *Galatia, etc.*, p. 213, Nos. 512, 513.)  
 286 E6b. [11.3.]  
 287 E6c. [12.8.]  
 288, 289 E6d. [13.0, 10.8.]  
 290 G6a. [13.0.]  
 291 I6a. [11.1.]  
 (B.M.C., *Galatia, etc.*, p. 213, Nos. 515, 516.)  
 292 I6b. [10.4.]  
 293 I6d. [13.0.]  
 294 J6a. [8.6.]  
 295 N6d. [14.1.]  
 296, 297 O6a. [12.2, 9.2 (badly corroded).]  
 (B.M.C., *Galatia, etc.*, p. 217, No. 542.)  
 298 P6a. [10.6.]  
 (B.M.C., *Galatia, etc.*, p. 217, No. 549.)  
 299 Q6a. [11.7.]  
 (B.M.C., *Galatia, etc.*, p. 217, No. 550.)  
 300 U6b. [11.0.]  
 301 U6b. [15.3.]  
 302, 303 V6b. [13.6, 12.4.]  
 (B.M.C., *Galatia*, p. 218, No. 556.)  
 304-310 D7. [14.1(2), 13.0, 12.7, 12.5, 11.7,  
 11.6.]

(B.M.C., *Galatia, etc.*, p. 214, No. 517.)

311, 312 E7. [13.0, 10.5.]

(B.M.C., *Galatia, etc.*, p. 214, No. 520.)

313-316 F7. [13.4, 13.0, 12.4, 11.3.]

317 H7. [10.9.]

318 K7. [11.8.]

319 L7. [11.5.]

320-347 T7. [13.3(2), 13.2, 13.1, 13.0, 12.8, 12.7, 12.5, 12.3(3), 12.2(2), 12.0, 11.9(2), 11.8, 11.3, 11.2(2), 11.1, 11.0(2), 10.8, 10.7, 10.4, 9.7, 11.5 (badly corroded).]

(B.M.C., *Galatia, etc.*, p. 218, No. 559.)

348 V7. [11.0.]

349 W7. [11.6.]

350-358 D8. [13.8, 13.0, 12.6, 12.5(2), 12.3, 12.0, 11.1, 10.8.]

(B.M.C., *Galatia, etc.*, p. 204, No. 518.)

359-361 E8. [11.9, 11.5, 10.2 (badly corroded).]

(B.M.C., *Galatia, etc.*, p. 214, No. 523.)

362 F8. [11.6.]

363-380 T8. [15, 14.5, 13.6, 13.2(2), 12.8, 12.3, 12.0(2), 11.9(2), 11.5, 11.2, 11.0, 10.9, 10.7, 10.0, 9.0 (badly corroded).]

(B.M.C., *Galatia, etc.*, p. 218, Nos. 560-563.)

381 U8. [9.8.]

(B.M.C., *Galatia, etc.*, p. 218, No. 551.)

382 V8. [12.8.]

383 W8. [11.0.]

*ANTONINIANUS*

## ANTIOCH

384 [3.0] *Obv.* IMPMIVLPFILIPPVS AVG.  
Bust of Philip Jr., r., radiate in cuirass.

*Rev.* PMTRPVICOSPP. Draped female figure standing l., sacrificing on flaming altar with r., holding short scepter in l. (249).

(Cohen, V, p. 164, No. 38.)

TRAJAN DECIUS, Oct. 249–May 251

HERENNIA ETRUSCILLA

HERENNIUS ETRUSCUS, 250–May 251

HOSTILIAN, 250–May 251

*TETRADRACHMS*

## ANTIOCH

As with the family of Philip, Trajan Decius struck the portraits of his wife and two sons on his coins. None of the coins are dated and Reverses 1 and 2 furnish no indication of priority. Indeed, since they are both used with all the Obverses, it is practically certain that they were contemporary and in use throughout the reign. Reverse 3 is certainly the latest. It is a type given in B.M.C. only for Herennia (p. 223, No. 606) and is much like the Reverses of Trebonianus

Gallus where, however, the pellet between the eagle's legs is replaced by a letter. It is found here only with Herennius and Hostilian (1 coin of each) and its rarity is probably to be accounted for by the fact that it was a new type which Decius inaugurated in the spring of 251 just before he set out for the war in which he perished. It cannot, however, be put too late in the spring because sometime before May Herennius became Augustus, and he appears still as Caesar on this piece. The order in which I give the Obverses is based on the inscriptions. Obverse A omits the name Trajan altogether and misspells Decius, B and C correct the misspelling and, by further abbreviation, make room for Trajan after Decius, D and E reverse this order and at last produce the proper title. I should surmise that A belongs to 249, B-E to 250, but this is a mere guess. G with its Truscilla for Etruscilla was probably later corrected to F. It is not possible to date these two nor H. J which is associated with Reverse 3 is, by hypothesis, of 251 and I is earlier.

For the first time we have a consistent system of officina marks adhered to throughout the reign. Eight officinae are represented, seven by a pellet or letter placed under the bust on the Obverse, the eighth by the absence of such mark.<sup>1</sup> In the

<sup>1</sup> In view of the fact that all the coins of Gallus bear officina marks it might be supposed that those of Decius which bear none are mere oversights. But, although they are not especially common, they are sufficiently numerous and of sufficient variety to assign them to a special officina.

the Catalogue these marks are recorded after the Obverse type letter.

The following types are used:

*Obverse.* A. ΑΥΤΟΚΚΓΑΙΜΕΚΤΙΝΔΕΚΚΙΟC-  
CΕΒ (Αὐτοκράτωρ Καῖσαρ Γαῖος Μέσσιος Κυίντος  
Δέκιος Σεβαστός). Bust r., draped, laureate.

B. ΑΥΤΟΚΓΜΕΚΤΔΕΚΙΟCΤΡΑΙΑΝΟCCEB.  
Bust r., draped, laureate.

C. Same inscription. Bust r., draped, radiate.

D. ΑΥΤΟΚΓΜΕΚΤΤΡΑΙΑΝΟCΔΕΚΙΟCCEB.  
Bust r., draped, laureate.

E. Same inscription. Bust r., draped, radiate.

F. ΕΡΕΝΝΙΑ ΕΤΡΟΤΚΙΑΛΛΑCΕΒ. Same  
type.

G. ΕΡΕΝΝΙΑ ΤΡΟΤΚΙΑΛΛΑCΕΒ. Bust r.,  
diademed, crescent behind shoulders.

H. ΕΡΕΝΝΕΤΡΟΤΜΕΚΤΔΕΚΙΟCΚΕCΑΡ  
(Ἐρέννιος Ἐτρουσκίλλος Μέσσιος Κυίντος Δέκιος  
Κέσαρ). Bust r., draped, head bare.

I. ΓΟΤΑΟCΤΙΑΙΑΝΜΕΚΤΙΝΤΟCΚΕCΑΡ  
(Γαῖος Οὐάλενς Ὅστιλιάνος Μέσσιος Κυίντος Κέσαρ).  
Bust r., draped, head bare.

J. ΓΟΤΑΟCΤΙΑΜΕΚΤΙΝΤΟCΚΕCΑΡ. Same  
type.

*Reverse.* 1. ΔΗΜΑΡΧΕΞΟΤCΙΑC. Eagle on  
palm branch, head l., in ex. S.C.

2. Same inscription. Eagle on palm branch,  
head r., in ex. S.C.

3. Same inscription. Eagle, head r., between  
legs., in ex. S.C.

- 385 A1. [11.2.]  
 (B.M.C., *Galatia, etc.*, p. 221, No. 589.)  
 386, 387 A2. [11.8, 12.1 (badly corroded).]  
 (B.M.C., *Galatia, etc.*, p. 222, No. 595.)  
 388 A.2. [11.0 (badly corroded).]  
 389–393 B.1. [13.1, 12.8, 11.5, 11.4, 11.2.]  
 394–397 B..1. [12.1, 11.9(2), 11.2.]  
 398, 399 B...1. [12.2, 12.0.]  
 (B.M.C., *Galatia, etc.*, p. 221, No. 585.)  
 400, 401 B....1. [11.6, 11.5.]  
 402 Bs1. [13.8.]  
 403, 404 B2. [12.7, 12.5.]  
 405–409 B.2. [13.2, 12.6, 11.4, 11.2.]  
 (B.M.C., *Galatia, etc.*, p. 222, No. 596.)  
 409, 410 B...2. [12.8, 12.3.]  
 (B.M.C., *Galatia, etc.*, p. 222, No. 597.)  
 411 B.....2. [13.7.]  
 412–415 C.1. [12.9, 12.8, 12.3, 11.7.]  
 416 C...1. [13.1.]  
 (B.M.C., *Galatia, etc.*, p. 221, No. 586.)  
 417, 418 C....1. [13.3, 11.1.]  
 419 Cs1. [9.3.]  
 420, 421 C.2. [12.5, 11.4.]  
 422 C....2. [11.5.]  
 (B.M.C., *Galatia, etc.*, p. 222, No. 599.)  
 423, 424 C.....2. [13.4, 12.8.]  
 425–428 D1. [15.3, 12.8, 12.5, 10.1.]  
 (B.M.C., *Galatia, etc.*, p. 220, No. 578.)  
 429 D.1. [10.5.]  
 (B.M.C., *Galatia, etc.*, p. 220, No. 579.)

430-437 D..1. [14.1, 12.9(2), 12.7(2), 11.6,  
11.4, 10.0.]

(B.M.C., *Galatia, etc.*, p. 220, No. 580.)

438-441 D...1. [14.7, 12.9, 12.0, 10.1.]

(B.M.C., *Galatia, etc.*, p. 220, No. 581.)

442, 443 D....1. [11.6, 8.9 (badly corroded).]

(B.M.C., *Galatia, etc.*, p. 220, No. 582.)

444, 445 D.....1. [11.7, 11.0.]

446 DZ1. [11.5.]

447-449 D.2. [12.6, 11.7(2).]

450 D..2. [13.6.]

(B.M.C., *Galatia, etc.*, p. 221, No. 591.)

451-456 D...2. [13.4, 12.6, 11.4, 11.3, 11.1,  
10.7.]

457, 458 D....2. [11.7, 11.5.]

459, 460 D.....2. [13.8, 11.5.]

461-463 Ds2. [13.2, 11.7, 11.6.]

(B.M.C., *Galatia, etc.*, p. 221, No. 590.)

464, 465 DZ2. [13.9, 12.0.]

466 E....1. [13.2.]

467, 468 Es1. [13.2, 11.7.]

(B.M.C., *Galatia, etc.*, p. 220, No. 583.)

469 E..2. [10.3.]

470 E....2. [12.0.]

471 E.....2. [Broken in two.]

472 Fs2. [12.1.]

473 F1. [10.0.]

474, 475 F...2. [12.7, 11.2.]

(B.M.C., *Galatia, etc.*, p. 223, No. 605.)

476 Fs2. [13.3.]



- 477 G.....1. [12.3.]  
 (B.M.C., *Galatia, etc.*, p. 223, No. 607.)  
 478 G2. [11.2.]  
 479-481 H.1. [12, 11.4, 9.0.]  
 482 H..1. [11.1.]  
 483, 484 H...1. [12.5, 11.4.]  
 485-487 H.....1. [13.6, 13.1, 12.2.]  
 488-490 H.....1. [13.4, 13.2, 10.8.]  
 491-494 HZ1. [13.3, 12, 11.3, 11.2.]  
 495-498 H.2. [12.8, 12.5, 12.3, 12.0.]  
 (B.M.C., *Galatia, etc.*, p. 224, No. 615.)  
 499-501 H...2. [12.5, 11.8, broken.]  
 502 H.....2. [13.4.]  
 (B.M.C., *Galatia, etc.*, p. 225, No. 618.)  
 503, 504 Hs2. [12.9, 11.8.]  
 (B.M.C., *Galatia, etc.*, p. 224, No. 619.)  
 505 HZ2. [11.9.]  
 (B.M.C., *Galatia, etc.*, p. 225, Nos. 620, 621.)  
 506 I1. [12.5.]  
 507 HA?(Δ?)3. [10.7.]  
 508 Jvi3. [13.4.]

This is the only case in which the officina mark is in Roman numerals as is later the custom on the Antoniniani of Tribonianus Gallus. (Cf. *R.N.*, 1929, p. 147.)

#### UNCERTAIN OFFICINAE

- 509 B1. [130.]  
 510, 511 B2. [11.5, 9.3.]  
 512 C2. [11.5.]

513-517 D1. [13.4(2), 12.9, 10.5, 10.9 (badly corroded).]

518-527 D2. [13.2, 13.0, 12.9, 12.3(2), 12.1, 11.8, 10.0(2), 11.5 (badly corroded).]

528, 529 E2. [11.5, 9.3.]

530, 531 H2. [11.9, 8.5 (badly corroded).]

532 *Obv.* uncertain, *Rev.* 2. [8.0 (badly corroded).]

### ANTONINIANI

#### ANTIOCH

533 [3.7] *Obv.* IMPCMQTRAIANVS DECIVS AVG. Bust r., draped, radiate, beneath, ...

*Rev.* AEQVITAS AVG. Equity standing l., holding in r. scales, in l. cornucopiae. (Cohen, V, p. 187, No. 9.)

534 [4.4] *Obv.* Same.

*Rev.* VICTORIA AVG. Victory running l., holding in r. wreath, in l. palm. (Cohen, V, p. 197, No. 111.)

535 [4.5] *Obv.* HERETRVSCILLA AVG. Bust r., diademed, crescent behind shoulders.

*Rev.* PVDICITIA AVG. Pudicitia seated left holding veil before her face with r., in l. holding long scepter. (Cohen, V, p. 210, No. 19.)

536 [4.1] *Obv.* Same.

*Rev.* VICTORIA AVG. Victory running l., holding in r. wreath, in l. palm.  
(Cohen, V, p. 212, No. 34.)

TREBONIANUS GALLUS, June 251–Oct. 253

VOLUSIANUS, Nov. 251–Oct. 253

### *TETRADRACHMS*

#### ANTIOCH

Following the precedent of the two previous reigns, Gallus associated his son with himself on his coins. As his 2nd Consulship came in 252, the undated reverses presumably belong to the first year of his reign. Of these there are three pieces in this hoard with the bust l., a type not represented in the British Museum or the Cabinet des Médailles. Was this an innovation at the beginning, at once abandoned? There is nothing to show whether it should be placed there or just before the change to the  $\text{TTIATOB}$  type, but, for convenience, it is placed first. There seems to be no priority between the eagles with the head l., and those with the head r., but the type with S.C. beneath the wings, although it bears the legend  $\text{TTIATOB}$ , is clearly later than the other issues with that inscription. Not only is the eagle a hopelessly scrawny fowl—that is partly

accounted for by the unfortunate device of putting letters under the bird's wings—but the bust of the Emperor has undergone a striking change for the worse. Altogether we are quite justified in assigning this type to 253. Whether or not the piece of Uranius Antoninus (B.M.C., *Galatia, etc.*, p. 231, No. 666) is to be assigned to Antioch, this last issue of Gallus is in effect the end of that mint's activity. One cannot regret it.

The officinae are always marked on coins of this reign, on the obverse by pellets, *ς* or *Ζ*, on the reverse by Greek letters. It is noticeable that five pellets and *ε* never occur. Not only is this true in these hoards but also in the British Museum and the Cabinet des Médailles collection. As this can hardly be accidental we must conclude that officina 5 was closed for some reason.

The following types are used:

*Obverse.* A. ΑΤΤΟΚΚΤΟΤΙΒΤΡΕΒΓΑΛΛΟC-  
CΕΒ (Αὐτοκράτωρ Καῖσαρ Γαῖος Οὐίβιος Τρεβωνιά-  
νος Γάλλος Σεβαστός). Bust l., draped, laureate.

B. Same inscription. Bust r., draped, laureate.

C. ΑΤΤΟΚΚΓΟΤΒΤΡΕΒΓΑΛΛΟC CΕΒ. Bust  
r., draped, laureate.

D. ΑΤΤΟΚΚΓΑΦΙΝΓΑΛΟΤΕΝΔΟΤΟΛΟΤC CΙ-  
ΑΝΟCCΕΒ (Αὐτοκράτωρ Καῖσαρ Γαῖος Ἀφίνιος  
Οὐενδουμνίανος <sup>1</sup> Οὐολουσιάνος Σεβαστός). Bust  
r., draped, radiate.

<sup>1</sup> Liebenam, *Fasti Consulares*, p. 114, gives the name as VELDVMIANVS, but it is always VEND or its equivalent both on the Latin and the Greek coins.

*Reverse.* 1. ΔΗΜΑΡΧΕΞΟΤCΙΑC. Eagle, head l., in ex. S.C.

2. Same inscription. Eagle, head r., in ex. S.C.

3. ΔΗΜΑΡΧΕΞΟΤCΙΑCΤΠΑΤΟΒ. Eagle, head l., in ex. S.C.

4. Same inscription. Eagle, head r., in ex. S.C.

5. Same inscription. Eagle, head l., beneath wings, to l., S, to r., C.

6. Same inscription. Eagle, head r., beneath wings, to l., S, to r., C.

(On 1–4 the officina mark is between the eagle's legs; on 5 and 6 it is in ex.)

537 AZ1Z. [12.9.]

538, 539 AZ2Z. [14.4, 13.8.]

540–549 B.1A. [13.2, 12.6, 11.9, 11.4, 11.3, 11.0, 10.8, 10.5, 10.3, 10.2.]

(B.M.C., *Galatia, etc.*, p. 227, No. 636.)

550 B..1B. [11.6.]

(B.M.C., *Galatia, etc.*, p. 227, No. 637.)

551 B...1Γ. [12.3.]

(B.M.C., *Galatia, etc.*, p. 227, No. 638.)

552–558 B....1Δ. [13.7, 13.1, 12.7, 11.9, 11.7, 11.5, 11.2.]

(B.M.C., *Galatia, etc.*, p. 227, No. 639.)

559–564 Bs1s. [13.5(2), 11.8, 11.6, 10.9, 10.7.]

(B.M.C., *Galatia, etc.*, p. 227, No. 640.)

565–567 BZ1Z. [14.8, 13.9, 13.0.]

(B.M.C., *Galatia, etc.*, p. 227, No. 641.)

568–574 B.2A. [13.2, 11.5, 11.4, 11.1, 10.5, 8.1, 9.3 (badly corroded).]

- (B.M.C., *Galatia, etc.*, p. 226, No. 630.)  
 575-581 B..2B. [14.8, 14.2, 13.2(2), 12.5, 11.0,  
 10.4 (badly corroded).]  
 (B.M.C., *Galatia, etc.*, p. 227, No. 631.)  
 582 B...2Γ. [9.0 (badly corroded).]  
 (B.M.C., *Galatia, etc.*, p. 227, No. 632.)  
 583 B....2Δ. [9.8 (badly corroded).]  
 (B.M.C., *Galatia, etc.*, p. 227, No. 633.)  
 584-587 Bs2s. [15.0, 12.4, 11.6, 10.8 (badly  
 corroded).]  
 (B.M.C., *Galatia, etc.*, p. 227, No. 634.)  
 588 BZ2Z. [11.6.]  
 (B.M.C., *Galatia, etc.*, p. 227, No. 635.)  
 589-591 D.1A. [13.2, 12.5, 11.2.]  
 592 D..1B. [11.7.]  
 (B.M.C., *Galatia, etc.*, p. 230, No. 658.)  
 593, 594 D..2B. [12.0, 11.7.]  
 (B.M.C., *Galatia, etc.*, p. 230, No. 662.)  
 595 D...2Γ. [10.8.]  
 (B.M.C., *Galatia, etc.*, p. 230, No. 663.)  
 596 Ds2s. [12.3.]  
 597, 598 B.3A. [12.2, 11.4.]  
 (B.M.C., *Galatia, etc.*, p. 228, No. 649.)  
 599-601 B..3B. [12.1, 11.4, 11.1.]  
 (B.M.C., *Galatia, etc.*, p. 229, No. 650.)  
 602 B....3Δ. [11.6.]  
 603-605 Bs3s. [12.0, 11.1, 10.3 (badly cor-  
 roded).]  
 (B.M.C., *Galatia, etc.*, p. 229, No. 652.)  
 606 BZ3Z. [10.8.]

607 CZ3Z. [13.7.]

608, 609 B.4A. [11.7, 12.4 (badly corroded).]

610–613 B..4B. [13.6, 11.2, 11.1, 10.3.]

(B.M.C., *Galatia, etc.*, p. 228, No. 643.)

614 B...4Γ. [10.6.]

(B.M.C., *Galatia, etc.*, p. 228, No. 644.)

615 Bs4s. [12.8.]

(B.M.C., *Galatia, etc.*, p. 228, No. 646.)

616, 617 BZ4Z. [12.9, 10.8.]

(B.M.C., *Galatia, etc.*, p. 228, No. 647.)

618–621 B.5A. [12.9, 10.6, 10.3, 8.9 (badly corroded).]

622–631 B...5Γ. [12.9, 12.8, 12.0(3), 11.8, 11.4, 11.2, 11.0, 10.6.]

632 B.6A. [11.3.]

(B.M.C., *Galatia, etc.*, p. 228, No. 642.)

633–639 B...6Γ. [13.7, 13.4, 13.0, 12.3, 12.2, 12.1, 11.4.]

640–643 B....6Δ. [13.4, 12.8, 11.6, 11.5.]

644–649 Bs6s. [15.1, 14.1, 14.0, 13.0, 11.9, 10.7.]

650, 651 BZ6Z. [11.9, 8.9.]

(B.M.C., *Galatia, etc.*, p. 228, No. 648.)

#### UNCERTAIN OFFICINA

652 B?6? [11.0.]

#### DOUBLE STRUCK

653 [11.2] *Obv.* ΟΤΙΑCOTIBTPΕΒΓΑΛΛΟC-  
CΕB. Bust r., draped, laureate, beneath, ....

*Rev.* ΔΗΜΑΡΧΕΞΟΤΙΑCΤΤΙB-

TPCBΓ. Eagle, head l., beneath wings, to l. S., to r. C., ex. obliterated.

## ANTONINIANI

### ANTIOCH

Cohen (V, p. 236, Note 2) noticed that certain of the Antoniniani of Gallus bore pellets or numbers in the exergue and said of them, "*toutes ces monnaies avec des chiffres ou des points ont dû être frappées à Antioche de Syrie.*" Our pieces confirm his hypothesis. The marks are analogous to those on the tetradrachms, except that, instead of S and Z, these coins, in harmony with their Latin inscriptions, have VI or VII. (At times they appear as IV and IIV. The former of these might be taken to mark the fourth officina, but the latter can be nothing but VII, inverted by the ignorance of the Antiochene die sinker. As the fourth officina is indicated by .... this also must be a case of inversion.) As on the tetradrachms, there is no sign of the fifth officina, either here or in Cohen. There are a few pieces which have no marks and which may, therefore, come from another mint. But their appearance is so like the others that they are included with them. The style of all is careless and ugly, like that of the last issue of tetradrachms.

The following types are used:

4



*Obverse.* A. IMPCCVIBTREBGALLVS PF  
AVG. Bust r., draped, radiate.

B. IMPCCVIBVOLVSIANVS AVG. Bust r.,  
draped, radiate.

C. IMPCVAFGALVENDVOLVSIANO AVG.

*Reverse.* 1. ADVENTVS AVG. Emperor on  
horseback l., raising r., holding scepter in l.

2. AEQVITAS AVG. Aequitas standing l.,  
holding scales and cornucopiae.

3. FELICITAS PVBL. Felicitas standing l.,  
holding in r. caduceus, in l. cornucopiae.

4. IVNO MARTIALIS. Juno seated l., hold-  
ing in r. uncertain object, in l. scepter.

5. MARTEM PROPVGNATOREM. Mars,  
helmeted, walking r., holding in r. transverse  
spear, on l. arm shield.

6. MARTI PACIFERO. Mars walking l.,  
holding in upraised r. branch, in l. long scepter.

7. PAX AVGVS. Pax standing l., holding in  
upraised r. branch, in l. transverse scepter.

8. ROMAE AETERNAE AVG. Rome seated  
l., holding in outstretched r. Victory, with l.  
leaning on spear, shield beside her.

9. SAECVLVM NOVVM. Hexastyle temple,  
within which, figure seated facing holding in l.  
long scepter.

10. SAECVLLVM NOVVM. Same type.

11. VICTORIA AVG. Victory walking l.,  
holding in r. wreath, in l. palm.

12. VICTORIA AVG. Victory r. on globe,  
holding in outstretched r., wreath, in l. palm.

654 A.1.. [3.3.]

(Cohen, V, p. 236, No. 3.)

655 B.1.. [3.5.]

(Cohen, V, p. 266, No. 1.)

656 A1. [5.1.]

(Cohen, V, p. 236, No. 3. There are apparently no marks in ex. and, since the style is slightly different, this may be from another mint.)

657, 658 A.2.. [4.3, broken in two.]

(Cohen, V, p. 237, No. 6.)

659 A..2... [4.1.]

(Cohen, *ibid.*)

660 AvI2vI. [4.2.]

(Cohen, *ibid.*)

661 AIIv2IIV. [4.4.]

(Cohen, *ibid.*)

662 A.3.. [3.7.]

(Cohen, V, p. 240, No. 34.)

663, 664 A..3... [Badly corroded.]

(Cohen, *ibid.*)

665, 666 A....3..... [4.6, 3.9.]

(Cohen, *ibid.*)

667 AIV3IV. [Broken.]

(Cohen, *ibid.*)

668 AvII3VII. [4.2.]

(Cohen, *ibid.*)

669-673 A3. [4.8, 4.6, 3.5, badly corroded (2).]

(Cohen, *ibid.*, there seem to be no marks here.)

674, 675 A.4.. [3.7, broken.]

(Cohen, V, p. 243, No. 47.)

671 A....4..... [3.5]

Cohen, *ibid.*

672, 673 A5. [5 to 8.4]

Cohen, V. p. 245, No. 70. No mark in ex.

674-681 A1. [5.2, 4.2, 4.1]

Cohen, V. p. 245, No. 71. No mark in ex.

682-684 A.....7..... [4.6, 3.9, badly corroded.]

Cohen, V. p. 247, No. 80.

685 A..5... [4.1]

Cohen, V. p. 250, No. 105.

686 A1111. [5.2]

Cohen, *ibid.*

687 B..10... [3.5]

Cohen, V. p. 277, No. 110.

688 A..9... [5.0]

Cohen, V. p. 251, No. 111.

689 A11. [Broken.]

Cohen, V. p. 252, No. 120. The ex. is broken away.

690 C...12.... [3.4]

Cohen, V. p. 278, No. 120.

VALERIANUS, Aug. 253–260

GALLIENUS, Aug. 253–March 268

*ANTONINIANI*

All our coins of these two rulers come from the period of their joint reign, 253–260. Indeed they are all from the first three years. Now in 256, Sapor, the Sassanian king, invaded Syria and captured Antioch. It was recaptured by Valerian in the next year, but it is probable that the mint was moved to some safer spot, for the later coins of these emperors from Asia are of a different style. The temporary or permanent interruption of Antioch's activity might be considered sufficient explanation of the fact that no later coins are found in this hoard were it not for the fact that there are a number of pieces of Valerian from the mint of Rome, whether because Antioch was not coining in sufficient quantity or for some other reason. Currency was evidently imported now and of course this could have continued after the fall of Antioch. But the last Roman pieces also are of 256 and, since the other evidence agrees perfectly, the conclusion must be that Dura was taken by Sapor either on his invasion of Syria or on his retreat. The most modern work on these issues is H. Mattingly and E. A. Sydenham, *The Roman Imperial Coinage*, Vol. V, Part I; P. H. Webb, *Valerian to Florian* (cited as *R.I.C.*), but

the material on Antioch is slight, containing only one of our coins.

The following types are used:

*Obverse.* A. IMP C PLIC VALERIANVS AVG.  
Bust r., draped, radiate (253, 254).

B. IMP C P LIC VALERIANVS PF AVG.  
Same type (256).

C. IMP C P LIC GALLIENVS AVG. Bust  
r., draped, radiate (253, 254).

*Reverse.* 1. AEQVITAS AVGG. Aequitas  
standing l., holding in r. scales, in l., cornucopiae  
(256).

2. AETERNITATI AVGG. Sol standing l.,  
r. raised, holding in l. globe (256).

3. LAETITIA AVGG. Laetitia standing l., in  
r. holding wreath, with l., leaning on anchor (254  
and 256).

4. ROMAE AETERNAE. Rome seated l.,  
holding in r. victory, with l. leaning on spear;  
beside her, shield (254 and 256).

5. SALVS AVGG. Salus standing r., with l.  
feeding serpent twined about her (256).

6. VENVS VICTRIX. Venus standing l.,  
holding in r. crested helmet, in l. transverse  
scepter; l. elbow leaning on shield (254 and 256).

7. VICTORIA AVGG. Victory standing l.,  
holding in r. wreath, in l. palm (254).

8. VIRTVS AVGG. Soldier standing l., lean-  
ing with r. on shield, with l. on spear (254).

## ANTIOCH

691 B1. [3.8.]

(*R.I.C.*, p. 59, No. 279.)

692-695 B2. [3.9, 3.8, 2.4, corroded.]

696-701 B3. [5.2, 4.8, 4.1, 4.0, 3.3, corroded.]

702-717 C3. [4.6, 4.1(3), 4.0(broken), 3.9, 3.8, 3.6(broken), 3.5, 3.4(2), 3.2, 3.0, 2.9(2), 2.7.]

718-725 B4. [4.7, 4.1, 4.0, 3.9, 3.7, corroded (3).]

726-728 C4. [4.0, 3.9, 3.2.]

(These may be from Rome.)

729-735 B5. [4.9, 4.3, 4.1, 3.8, corroded (3).]

736-738 B6. [5.1, 3.4(2).]

739-743 C6. [4.6(2), 4.2, 4.1, 3.5.]

744-748 C7. [4.0, 3.8, 3.2, corroded, broken.]

749-750 A8. [Broken.]

751-769 B8. [5.3, 5.2, 4.5(3), 4.4(2), 4.1, 3.9, 3.8, 3.7(2), 3.5(2), 3.3, 3.2, corroded, broken (2).]

770 C8. [3.8.]

## ROME

771-779 A3. [4.4, 4.1, 4.0, 3.9, 3.7(2), 3.6, 3.0, corroded.]

(*R.I.C.*, p. 46, No. 97.)

780-781 A4. [4.4, 3.8.]

(*R.I.C.*, p. 47, No. 120.)

782 B4. [4.7.]

783-786 A7. [3.9, 3.4, 2.9, broken.]

(*R.I.C.*, p. 48, No. 124.)

787 A8. [4.3.]

(*R.I.C.*, p. 48, No. 133.)

788, 789 B?. [Broken.]

## HOARD II

In a few cases which are specially noted, types appear here that are not in the larger hoard. There are also some minor varieties, that is different combinations of type and officina, but most of the pieces are duplicates. The letters and figures refer to the types already described in Hoard I. The condition is so inferior, both as to wear and as to corrosion, than that of the other hoard, that the weights run distinctly lower and are much less reliable.

## CARACALLA

### *TETRADRACHM*

### EDESSA

1 [13.1] *Obv.* ATT·K·M·A·[ANT]ΩNЄINOC  
CЄB. Bust, in cuirass, r., laur.; behind the head,  
Δ.

*Rcv.* ΔHMAPXЄEVΠATOC TO Δ.  
Eagle, head r.; between legs, small temple or  
shrine.

(Cf. *B.M.C., Galatia*, p. 197, No. 379.)

In discussing a coin of Macrinus (No. 14 above)

it has already been suggested that the appearance of this symbol on the bronze of Edessa makes this a reasonable attribution.

## ELAGABALUS

*TETRADRACHMS*

2, 3 A or B1. [Badly corroded.]

## GORDIAN III

*TETRADRACHMS*

4 A2. [12.6.]

5 A5. [12.8.]

(B.M.C., *Galatia, etc.*, p. 212, Nos. 502, 503.)

6 C2. [9.8.]

(B.M.C., *Galatia, etc.*, p. 211, No. 499.)

*ANTONINIANI*

7 B8.

(Cohen, V, p. 32, No. 109.)

8 B10.

(Cohen, V, p. 33, No. 121.)

9 B18.

(Cohen, V, p. 54, No. 298.)

10 B23.

(Cohen, V, p. 60, No. 362.)



PHILIP, SR.

PHILIP, JR.

*TETRADRACHMS*

- 11 A1a(?). [Badly corroded.]  
 12 A1c. [10.8.]  
 13 E5. [11.0.]  
 (B.M.C., *Galatia, etc.*, p. 213, No. 514.)  
 14 E6b. [11.1.]  
 15 E6d. [9.7.]  
 16, 17 D7. [11.6, 10.3.]  
 (B.M.C., *Galatia, etc.*, p. 214, No. 517.)  
 18 D8. [11.0.]  
 (B.M.C., *Galatia, etc.*, p. 214, No. 518.)  
 19 E7. [11.2.]  
 (B.M.C., *Galatia, etc.*, p. 214, No. 520.)  
 20-22 T7. [13.1, 12.1, 10.0.]  
 (B.M.C., *Galatia, etc.*, p. 218, No. 559.)  
 23 T8. [12.8.]  
 (B.M.C., *Galatia, etc.*, p. 218, Nos. 560-563.)

*ANTONINIANUS*

- 24 [4.1] *Obv.* IMPMIVLPFILIPPVS AVG.  
 Bust of Philip Sr., r., draped, radiate.  
*Rev.* SAECVLVM NOVVM. Hexa-  
 style temple, within which seated figure facing  
 (248).  
 (Cohen, V, p. 114, No. 199.)

TRAJAN DECIUS  
HERENNIA ETRUSCILLA  
HERENNIUS ETRUSCUS

*TETRADRACHMS*

- 25 A1. [12.9.]  
(B.M.C., *Galatia, etc.*, p. 221, No. 589.)  
26, 27 B..1. [10,1, 9.2.]  
28 B.2. [11.6.]  
(B.M.C., *Galatia, etc.*, p. 222, No. 596.)  
29 B...2. [12.1.]  
(B.M.C., *Galatia, etc.*, p. 222, No. 597.)  
30 C..1. [11.5.]  
(Not in Hoard I.)  
31 C.....1. [10.5.]  
(B.M.C., *Galatia, etc.*, p. 221, No. 587. Not in  
Hoard I.)  
32 CZ1. [11.6.]  
(Not in Hoard I.)  
33 C..2. [13.2.]  
(Not in Hoard I.)  
34 D.1. [Badly corroded.]  
(B.M.C., *Galatia, etc.*, p. 220, No. 579.)  
35, 36 D..1. [13.1, badly corroded.]  
(B.M.C., *Galatia, etc.*, p. 220, No. 580.)  
37, 38 D...1. [11.9, 9.8.]  
(B.M.C., *Galatia, etc.*, p. 220, No. 581.)  
39 DZ1. [Badly corroded.]  
40 D.2. [12.6.]

41 D..2. [12.1.]

(B.M.C., *Galatia, etc.*, p. 221, No. 591.)

42 D...2. [13.0.]

43 D....2. [10.9.]

44, 45 Ds2. [10.0, 9.7.]

(B.M.C., *Galatia, etc.*, p. 221, No. 590.)

46 E..1. [12.0.]

(Not in Hoard I.)

47, 48 Es1. [10.6, 9.4.]

(B.M.C., *Galatia, etc.*, p. 220, No. 583.)

49 E....2. [10.0.]

50 G...2. [10.9.]

(B.M.C., *Galatia, etc.*, p. 223, No. 605. Not in Hoard I.)

51 H..1. [10.5.]

52, 53 H...1. [11.4, 10.1.]

54 H....1. [10.3.]

55 Hs1. [13.5.]

(Not in Hoard I.)

56, 57 H...2. [10.9, 10.1.]

58 H....2. [12.4.]

(B.M.C., *Galatia, etc.*, p. 224, No. 617.)

59 Hs2. [Badly corroded.]

(B.M.C., *Galatia, etc.*, p. 224, No. 619.)

#### UNCERTAIN OFFICINA

60, 61 B1. [10.4, badly corroded.]

62 C1. [Badly corroded.]

63, 64 D1. [11.1, 8.8.]

65 H1. [13.6.]

66 H2. [Badly corroded.]

67 [10.9] *Obv.* ΑΥΤΚΚΜΕΚΥΤΡΑΙΑΝΟCΔΕ-  
ΚΙΟCCΕΒ. Bust, in cuirass, l., radiate.

*Rev.* 1.

There are no published examples with the bust  
l. I am inclined to believe that this was Decius'  
latest type, followed by the rare coins of Gallus  
with the bust l. (Nos. 537–539, Hoard I.)

## TREBONIANUS GALLUS

### *TETRADRACHMS*

68 B...1Γ. [Badly corroded.]

(B.M.C., *Galatia, etc.*, p. 227, No. 638.)

69 B....1Δ. [9.9.]

(B.M.C., *Galatia, etc.*, p. 227, No. 639.)

70 BZ1Z. [11.1.]

(B.M.C., *Galatia, etc.*, p. 227, No. 641.)

71 B.2A. [11.6.]

(B.M.C., *Galatia, etc.*, p. 226, No. 630.)

72 B..2B. [Badly corroded.]

(B.M.C., *Galatia, etc.*, p. 227, No. 631.)

73 B...2Γ. [Badly corroded.]

(B.M.C., *Galatia, etc.*, p. 227, No. 632.)

74, 75 B....2Δ. [10.8, 8.7.]

(B.M.C., *Galatia, etc.*, p. 227, No. 633.)

76 B.3A. [11.3.]

(B.M.C., *Galatia, etc.*, p. 228, No. 649.)

77, 78 B..3B. [Badly corroded.]

(B.M.C., *Galatia, etc.*, p. 229, No. 650.)

79–83 B..4B. [11.2, 11.0, 10.7, 10.0, 9.5.]

(B.M.C., *Galatia, etc.*, p. 228, No. 643.)

84, 85 B̄s4s. [12.4, 8.9.]

(B.M.C., *Galatia, etc.*, p. 228, No. 646.)

86 B̄s5s. [Badly corroded.]

(Not in Hoard I.)

87–93 B....6Δ. [12.1, 11.1(2), 11.0, 9.6, badly corroded (2).]

94 BZ6Z. [10.9.]

(B.M.C., *Galatia, etc.*, p. 228, No. 648.)

The following bronze coins were found with Hoard II:

### CARACALLA?

#### CARRHAE?

95 15 mm. *Obv.* Obliterated.

*Rev.* Crescent. Obscure and doubtful.

### ELAGABALUS

#### EDESSA?

96 25 mm. *Obv.* Bust r., undraped. May be Severus Alexander.

*Rev.* Obliterated.

## SEVERUS ALEXANDER

## ANTIOCH

97 30 mm. *Obv.* Bust r.

*Rev.* Tyche seated left. Both sides  
obscure.

(B.M.C., *Galatia, etc.*, p. 207, Nos. 470 ff.)

## EDESSA

98 24 mm. *Obv.* Bust r., undraped.

*Rev.* Tyche seated l. Obscure.

(B.M.C., *Mesopotamia, etc.*, pp. 106, 107.)

## NESIBI

99 30 mm. *Obv.* Bust r.

*Rev.* Bust of city goddess r., above  
her head, sign of Aries r. Both sides obscure but  
reasonably certain.

(B.M.C., *Mesopotamia, etc.*, p. 119, Nos. 4 ff.)

## GORDIAN III

## SINGARA

100 27 mm. *Obv.* Bust r., laur., in cuirass and  
paludamentum.

*Rev.* Bust of Tyche, r. ΑΤ]ΡCΘ-  
Π[ΚΟΛCΙΝΓΑΡΑ. Obscure but certain.

(B.M.C., *Mesopotamia, etc.*, p. 134, No. 3.)

## UNCERTAIN MINT

101 22 mm. *Obv.* Bust r. Very obscure.

*Rev.* Obliterated.

One bronze of Antiochus VIII, B.C. 121–96  
(B.M.C., *Seleucid Kings*, p. 90, Nos. 25 f.)  
accidentally mixed with the hoard.

DURA HOARD I

PLATE I



1



— 2 —



3



— 4 —





## DURA HOARD I



5



6



8



9



## PLATE II



10



11



12



13



## DURA HOARD I



14



15



16



17



# PLATE III



18



19



20



21



22



## DURA HOARD I



23



30



25



33



51



43



58



# PLATE IV



59



60



62



64



# DURA HOARD I



68



70



66



73



74



75





# PLATE V



76



77



80



81



91



— 88 —





# DURA HOARD I



5



6



8



9



## PLATE II



10



11



12



13



## DURA HOARD I



14



15



16



17



# PLATE III



18



19



20



21



22



## DURA HOARD I



23



30



25



33



51



43



58



# PLATE IV



59



60



62



64



# DURA HOARD I



68



66



70



73



74



72



71



75



76



# PLATE V



76



77



80



81



91



— 88 —







# PLATE VI



149



150



161



162



169



176



187



186



199



219

# DURA HOARD I



231



233



238



239



241



242



249



# PLATE VII



256



257



258



259



261



# DURA HOARD I



264



265



271



267



268



274



# PLATE VIII



275



276



277



284



287



281



286



290



# DURA HOARD I



92



110



103



116



104



123



138



131



124



146



# PLATE VI



149



150



161



162



169



176



187



186



219



199



# DURA HOARD I



231



233



238



239



241



242



249



# PLATE VII



256



257



258



259



261



# DURA HOARD I



264



265



271



267



268



274



# PLATE VIII



275



276



277



284



287



281



286



290

# DURA HOARD I



264



265



271



267



268



274



# PLATE VIII



275



276



277



284



286



281



287



290



# DURA HOARD I



295



296



292



294



298



299



# PLATE IX



300



301



318



311



319



304



— 320 —





# DURA HOARD I



383



385



350



386



392



# PLATE X



410



416



424



446



450



# DURA HOARD I



468



473



466



474



476



# PLATE XI



477



478



480



482



# DURA HOARD I



483



485



491



488



495



499



# PLATE XII





# DURA HOARD I



383



385



350



386



392



# PLATE X



410



416



424



446



450





# DURA HOARD I



468



473



466



474



476



PLATE XI



477



478



480



482



# DURA HOARD I



483



485



491



488



495



499



# PLATE XII



491



502



499



504



505



506



# DURA HOARD I



507



508



540



536



537



# PLATE XIII



589



575



592



593



590





# DURA HOARD I



595



599



596



607



614



PLATE XIV



618



640



654



661



655



— 665 —



# DURA HOARD I



669



676



677



679



686



682



# PLATE XV



687



688



689



690



691



696



# DURA HOARD I



702



718



726



729



736



744



739



# PLATE XVI



751



770



771



782



783



787



784



# DURA HOARD I



669



676



677



679



686



682



# PLATE XV



687



688



689



690



696



691



# DURA HOARD I



702



718



726



729



736



739



744





# PLATE XVI



751



770



771



782



783



787



784





# DURA HOARD II

# PLATE XVII



67



24



1



6



## NUMISMATIC NOTES AND MONOGRAPHS

1. Sydney P. Noe. Coin Hoards. 1921. 47 pp. 6 pls. 50c.
6. Agnes Baldwin. Five Roman Gold Medallions. 1921. 103 pp. 8 pls. \$1.50.
7. Sydney P. Noe. Medalllic Work of A. A. Weinman. 1921. 31 pp. 17 pls. \$1.00.
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14. George F. Hill. Attambelos I of Characene. 1922. 12 pp. 3 pls. \$1.00.
15. M. P. Vlasto. Taras Oikistes (A Contribution to Tarentine Numismatics). 1922. 234 pp. 13 pls. \$3.50.
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26. Edward T. Newell. Mithradates of Parthia and Hyspaosines of Characene. 1925. 18 pp. 2 pls. 50c.

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27. Sydney P. Noe. The Mende (Kaliandra) Hoard. 1926. 73 pp. 10 pls. \$2.00.
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47. Sydney P. Noe. The Coinage of Metapontum. Part II. 1931. 134 pp. 43 pls. \$3.00.
48. D. W. Valentine. The United States Half Dimes. 1931. 79 pp. 47 pls. \$5.00.









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